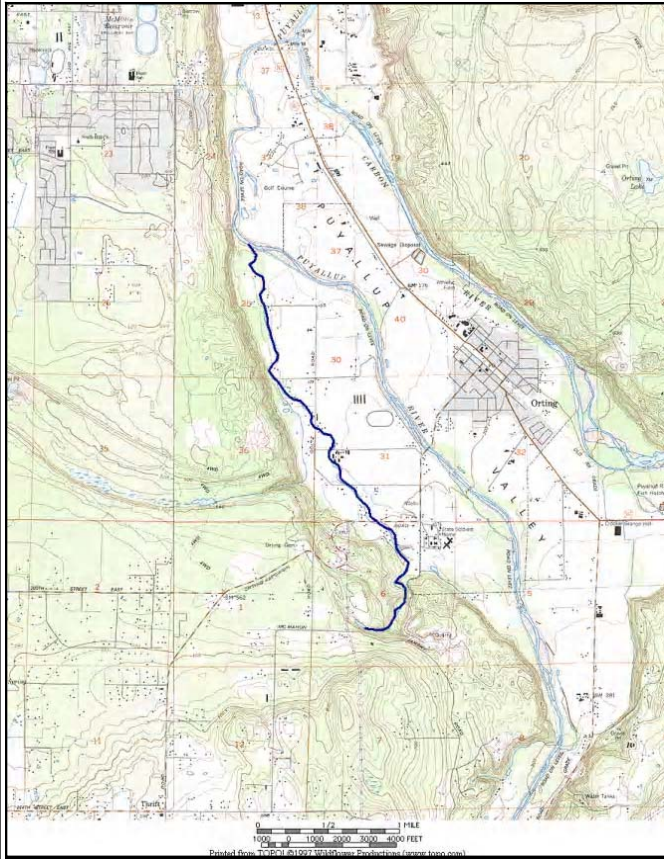


HORSE HAVEN CREEK

WRIA: 10.0589 - PUYALLUP RIVER

2004 - 2005



The mouth of Horse haven creek looking upstream.

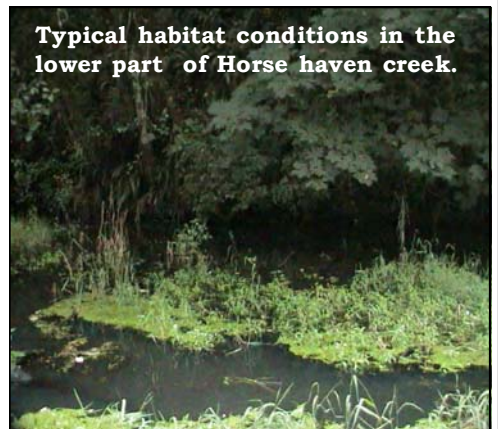
DESCRIPTION

Horse haven creek is a left bank tributary to the Puyallup River, the creek enters the Puyallup just North of the city of Orting at RM 20.2. Horse haven flows for 3.3 miles from its spring fed source with three smaller tributaries feeding the stream along the way. Horse

haven creek is not surveyed on a consistent basis due to the fact there is little adult salmon utilization, and issues regarding access to surveyable sections of the creek. Spot surveys have shown that an extremely limited number of coho and chum spawn in the creek, as well as a small tributary (10.0590) that enters around RM 1.0. However, the lower mile of the creek does offer good overwintering conditions for juvenile coho. Most of Horse Haven creek meanders through low lying private residences and agricultural land. The surrounding agricultural land use, which for many years has been mostly cattle, continues to impact channel conditions in Horse Haven Creek. Most of Horse haven creek is a narrow, confined, and incised channel, devoid of any quality woody debris,



Typical habitat conditions in the lower part of Horse haven creek.



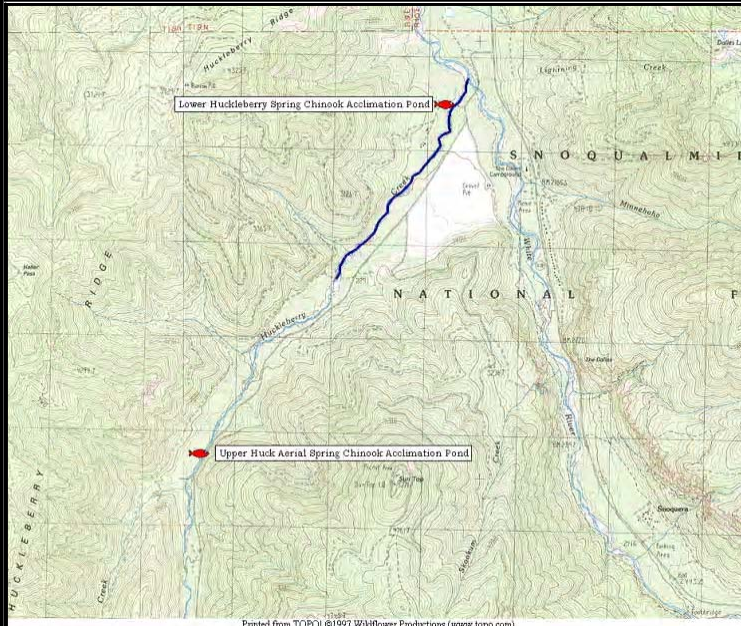
or varying flow and velocity regimes. Tremendous improvements to riparian conditions are possible but require willing land owners, technical expertise and funding. Despite its many habitat related shortcomings, Horse Haven Creek continues to support a small population of wild coho and chum.

There are several limiting factors that are likely causes for such under-utilization such as, but not limited to; extremely low summer and fall flows, poor water quality and heavy siltation, agricultural and storm runoff, as well as direct agricultural discharge into the creek.

HUCKLEBERRY CREEK

WRIA: 10.0253 - WHITE RIVER

2004 - 2005



DESCRIPTION

Huckleberry creek is a tributary to the Upper White River. The creek originates from the Huckleberry basin along the North slope of Mt. Rainier. The creek flows through the

National park and Snoqualmie National Forest lands before meeting the West Fork of the White at RM 53.1. The lower 0.3 miles (top photo) consists of a low gradient occasionally braided channel with a conifer and mixed deciduous riparian zone. The spawning gravel is excellent in the lower reach, which consistently supports the highest densities of spawners each season. Above the lower bridge, from RM 0.5 to 1.5, the gradient increases slightly but the gravel quality remains excellent, although slightly larger and patchy in nature. The riparian corridor consists of old growth conifers upstream of the acclimation pond at RM 0.5. Since 1994, the Puyallup tribe has operated two ponds used for acclimating spring chinook which are planted in March, and released in May or early June. The spring chinook plants are an integral part of the White River spring chinook recovery plan. The juvenile spring chinook originate from the Muckleshoot White River hatchery and the WDFW's hatchery on Minter Creek. Production levels have been around 400,000 smolts, however, it fluctuates based on available brood stock. They have a production capacity of 837,000 zero age smolts.

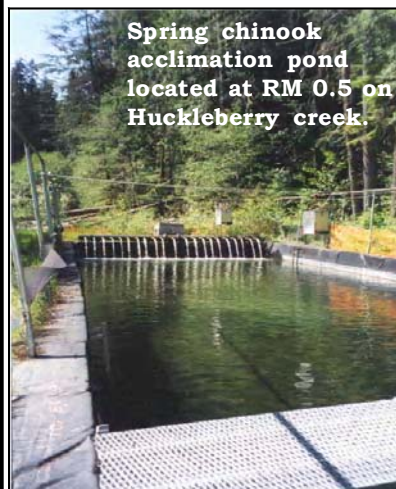
As with all upper White River tributaries, adult salmon and steelhead that spawn in Huckleberry creek are captured at the USACE fish trap in Buckley (see pg. 5), and transported above Mud Mountain dam. Since precise escapement numbers for the upper White River drainage are known, surveys are conducted to determine fish distribution and spawning success. This is important regarding spring chinook, since adult production monitoring is part of the recovery plan.

River miles surveyed: 0.0 to 1.5
Dates surveyed: 8/17/04 to 12/7/04
Species surveyed: Chinook, Coho, Pink

Upper Spring chinook acclimation pond located at RM 5 on Huckleberry creek.



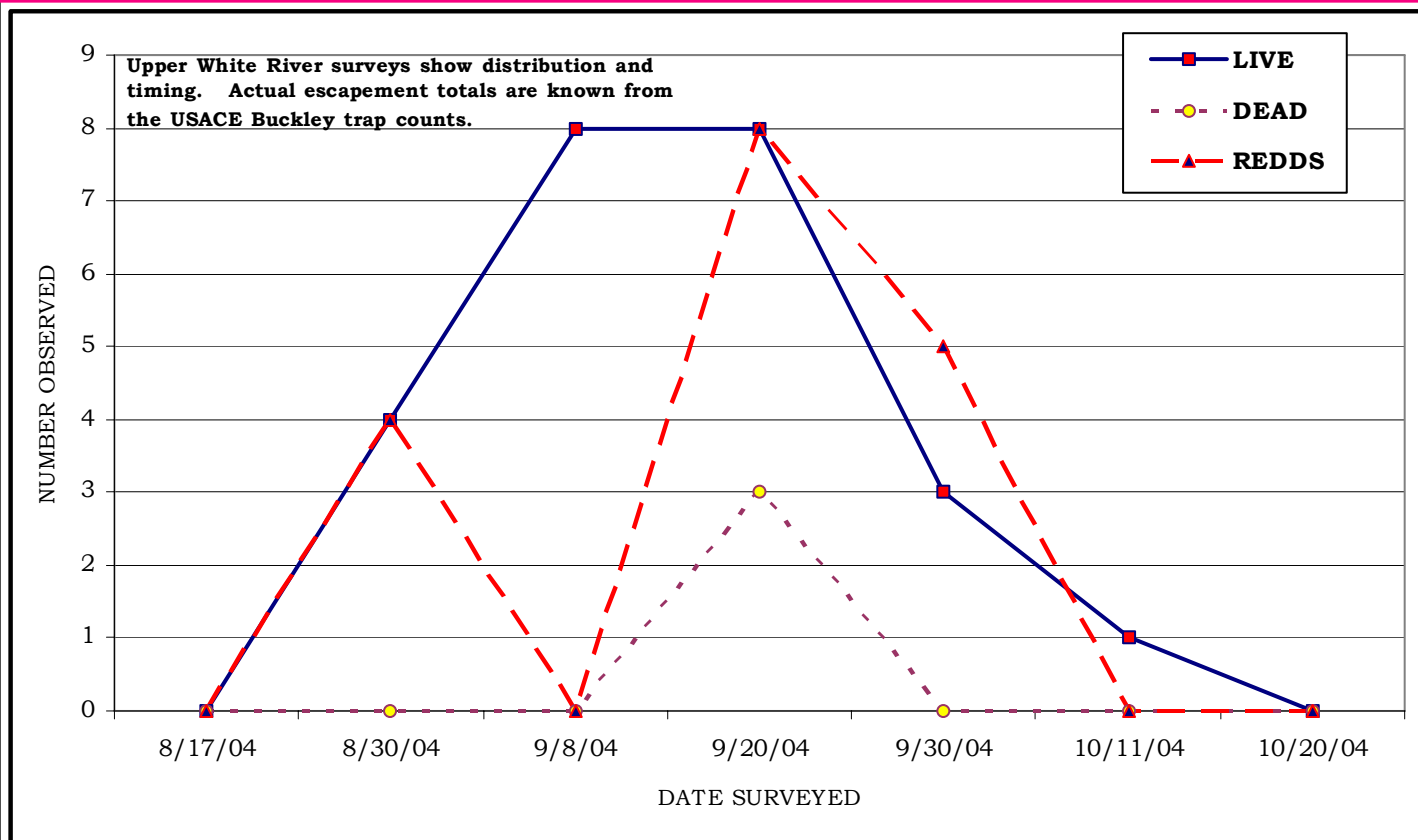
Spring chinook acclimation pond located at RM 0.5 on Huckleberry creek.



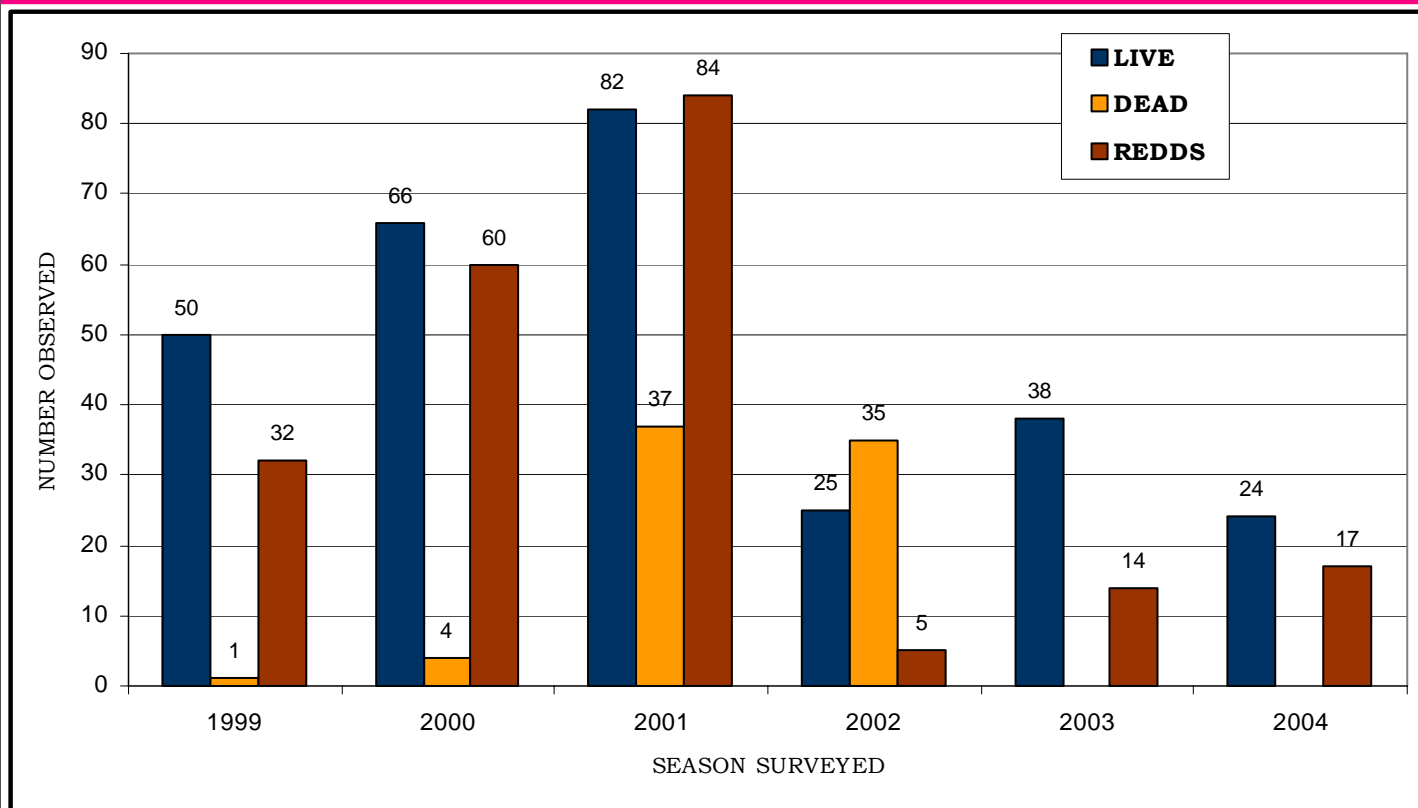
Huckleberry creek looking downstream from RM 1.3.



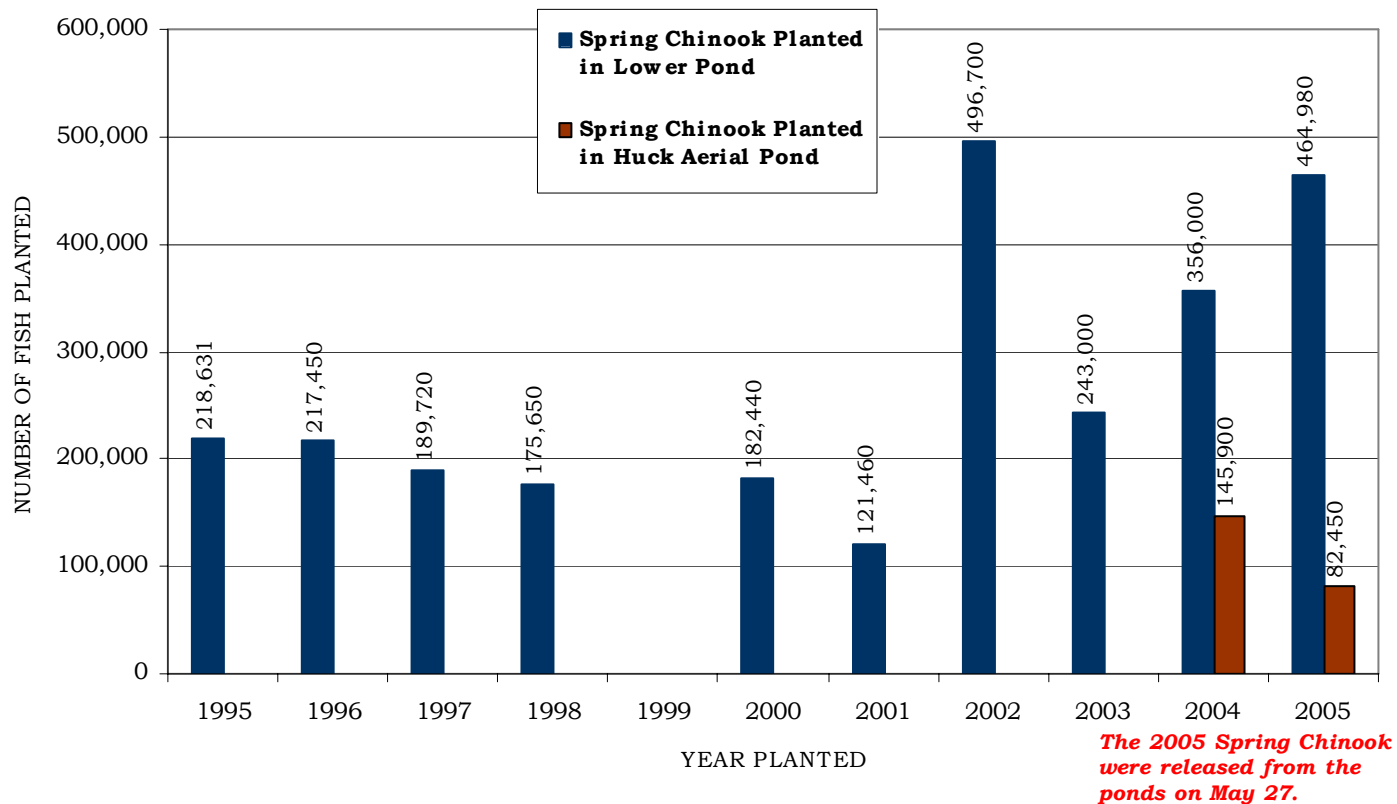
2004 HUCKLEBERRY CREEK CHINOOK COUNTS



HUCKLEBERRY CREEK CHINOOK SEASON COMPARISON (1999 - 2004)



HUCKLEBERRY CREEK SPRING CHINOOK ACCLIMATION POND PLANTS (1995 - 2005)

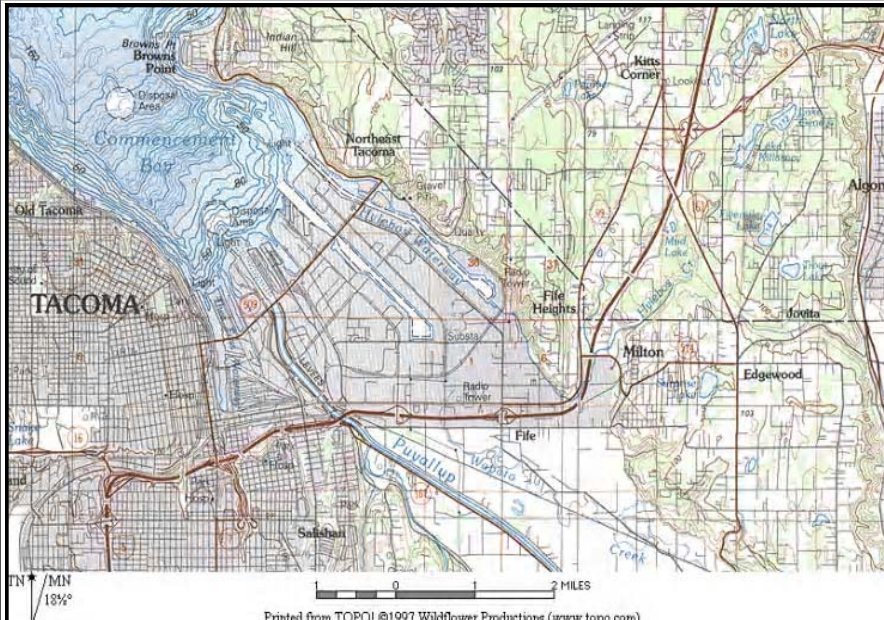


Between 100,000 to 500,000+ Spring chinook from the WDFW Minter creek and the Muckleshoot White River hatchery are transported to the Huckleberry creek acclimation ponds in early Spring, and released in late Spring. All fish are mass marked with left or right ventral fin clips. Odd brood years are marked with left ventral clips, and even years with right ventral clips. These fish can later be identified when caught at the USACE fish trap in Buckley and passed above the Mud Mountain dam to spawn.

HYLEBOS CREEK

WRIA: 10.0006 - INDEPENDENT DRAINAGE

2004 - 2005



Hylebos creek looking upstream above 373rd St. There is good spawning habitat both above and below this point. This 27-acre property was purchased in late 2004 by the Washington State Department of Transportation.



River miles surveyed: 0.1 to 0.3
Dates surveyed: Limited surveys in 2004
Species surveyed: Chinook, Coho, Chum, Pink

Access

Mile 0.2: Take 8th ST. exit off 167 and go West until East Valley Highway. There is a bridge approximately 0.2 miles North of 8th street.

DESCRIPTION

Hylebos creek is not a tributary to the Puyallup/White River system, but rather it flows directly into the Hylebos Waterway in Commencement Bay. Chinook, chum, coho pink salmon and steelhead, have all been observed spawning within the surveyed areas of Hylebos creek. Hylebos creek also host a large population of cutthroat trout. Currently, the Puyallup Tribe releases between 10 to 20 thousand juvenile fall chinook into Hylebos creek. Fish are planted in a large man-made pond located on the North fork of the creek (lower right). The stream

channel above and below the bridge at 373rd St. is moderately low gradient and somewhat incised. The riparian flora consists of turf grass, reed canary grass and alder, with a section of bamboo along a landowners property. A split in the channel at approximately RM 0.3 marks the confluence of the north and south forks of Hylebos creek. The substrate is very compacted with large amounts of fine material and some smaller gravel. The stream section most often surveyed extends from 373rd St., upstream to the Montessori school at Hwy. 99. Frequent channel dredging at 373rd St. is performed by the city of Federal Way in response to gravel deposition problems. The

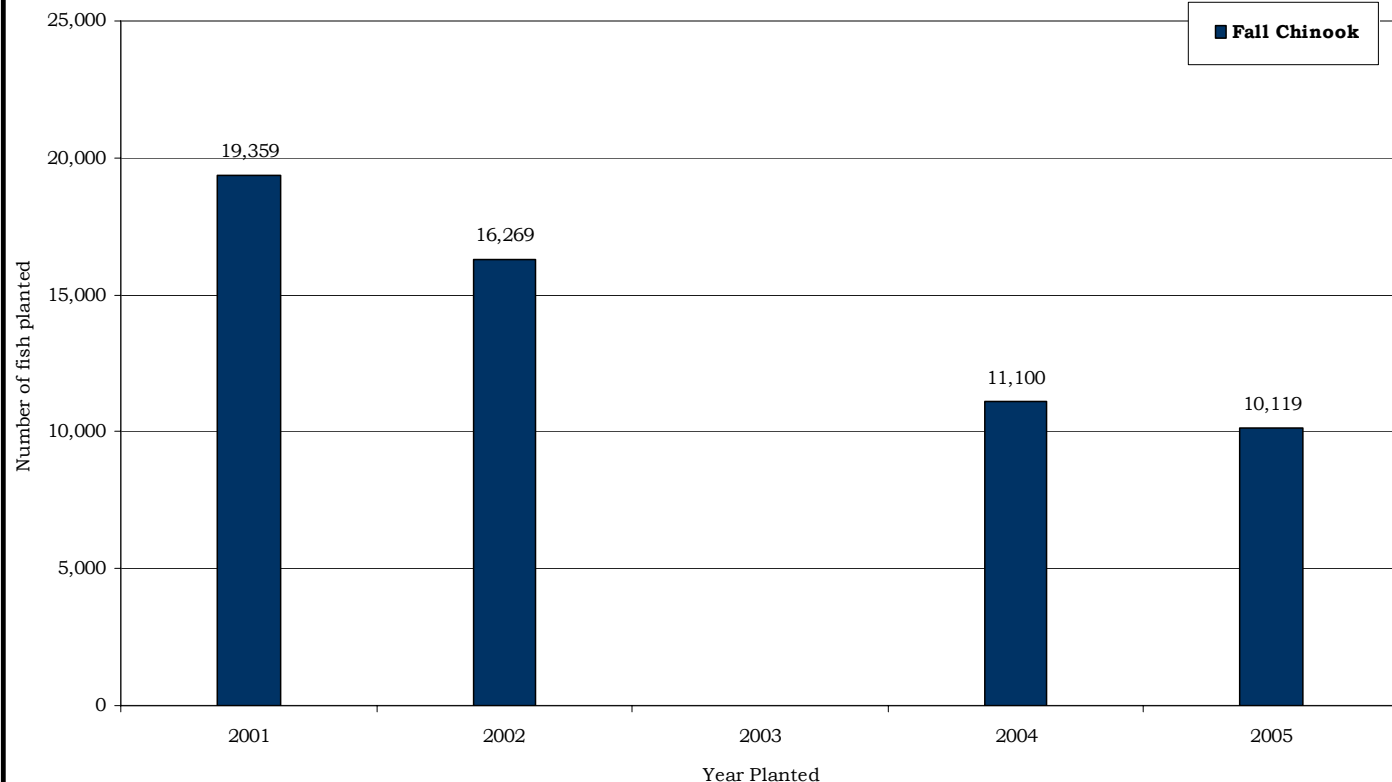


27 acres above 373rd St. (top photo), known as the Spring Valley Ranch, was purchased by the Washington State Department of Transportation in 2004. Future restoration plans for this site are currently under discussion. For more information about Hylebos creek, contact Friends of the Hylebos Wetlands at www.hylebos.org.



Large man-made pond on Hylebos creek.

HYLEBOS CREEK JUVENILE FALL CHINOOK PLANTS (2001 - 2005)



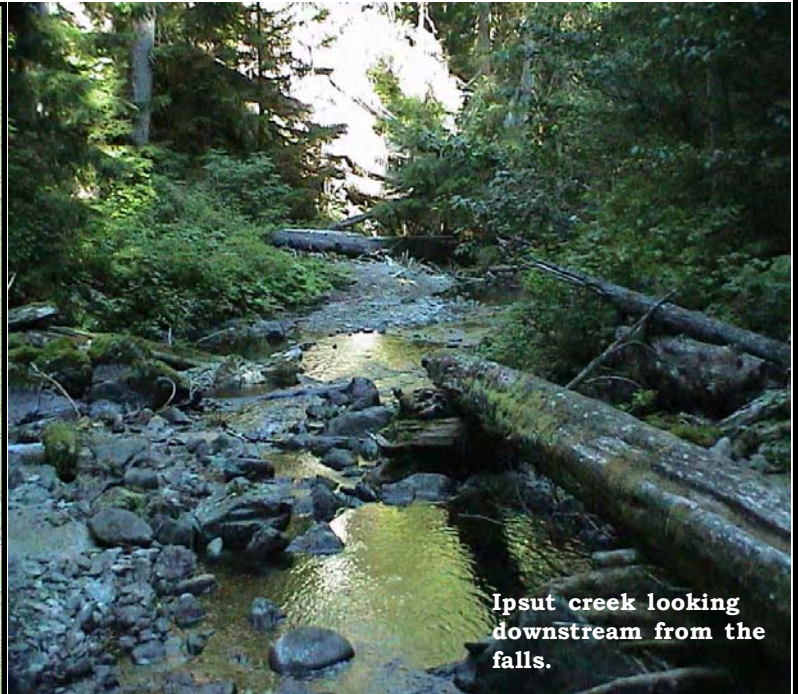
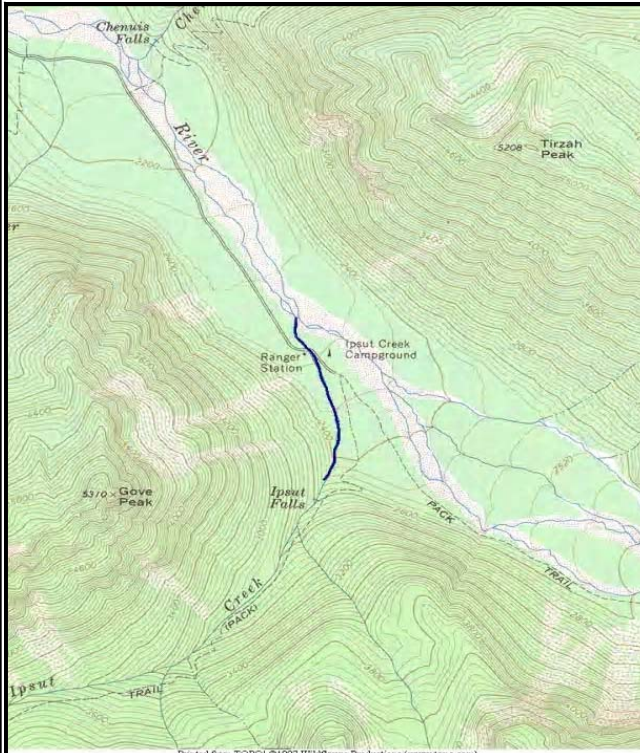
Fall Chinook Hatchery Production

Currently, the Puyallup Tribe releases between 10 to 20 thousand juvenile fall chinook into Hylebos creek. Fish are planted in a large man-made pond located on the North fork of the creek (See photo on previous page). Tribal fisheries currently rears 200,000 fall chinook for release from Clarks creek and 200,000 for acclimation ponds in the upper Puyallup river for a combined 6,857 pounds of fish. Historically, fall chinook have been reared since 1980 with a variety of stocks, goals, and objectives.

IPSUT CREEK

WRIA: 10.0550 - CARBON RIVER

2004 - 2005



Ipsut creek looking downstream from the falls.

DESCRIPTION

Ipsut creek is a moderate gradient left bank tributary to the upper Carbon River. Ipsut is pristine in many ways, it has approximately 0.7 miles of anadromous habitat and is located entirely within Mt. Rainier National Park. The riparian zone consists of old growth cedar, fir and hemlock which contributes large amounts of woody debris and diversity to the channel. There is a large falls located at approximately RM 0.7, which is a barrier to any further upstream migration. Ipsut creek campground is located along the lower stretch of the creek at RM 0.2. The Carbon River road bridge also crosses the creek at the campground site.

Ipsut has been surveyed for chinook, coho, steelhead and char, yet no salmon or redds have been observed. However, Ipsut does host a population of cutthroat trout, as do many of the upper tributaries in the park. Reasons for the absence of anadromous fish are likely related to the stream's location high within the basin, and the general lack of suitable spawning gravel. Much of the substrate within the lower fish accessible reach consists of flat angular stones. Char usage has been documented by National Park Service biologists, but surveys conducted by PTF staff in 2000 and 2001 did not reveal any adult char spawning activity. Due to the creek's remote location, surveys are not conducted on a regular basis.

River miles surveyed: 0.0 to 0.7

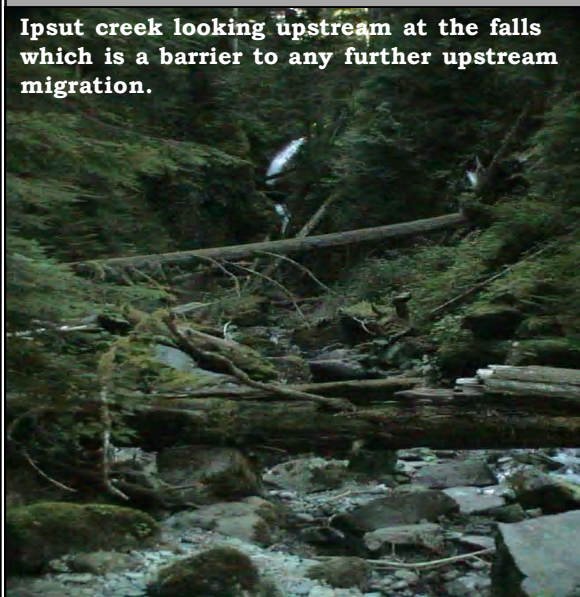
Dates surveyed: **NOT SURVEYED IN 2004**

Species surveyed: Chinook, Coho, Char
Steelhead

Access

Mile 0.3: The Ipsut creek campground is located at the end of the road past the Carbon River entrance to Mt. Rainier National Park. A bridge crosses the creek at the campground.

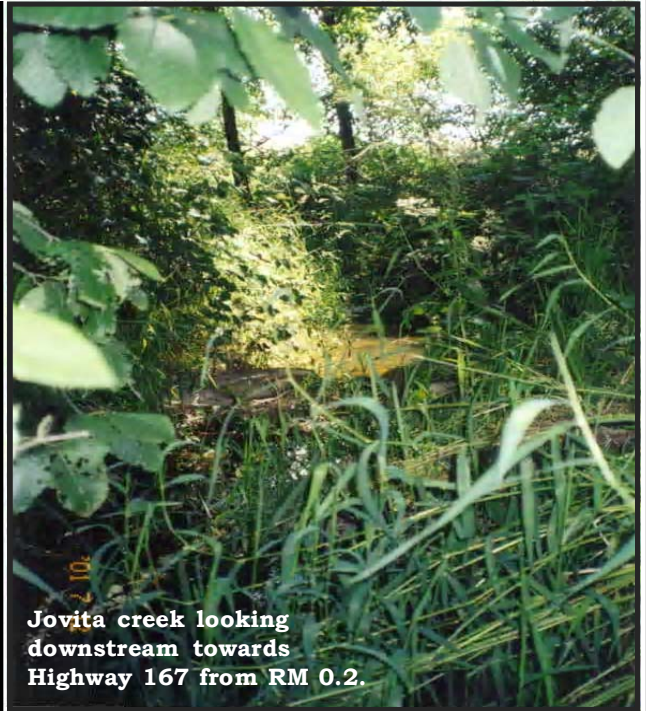
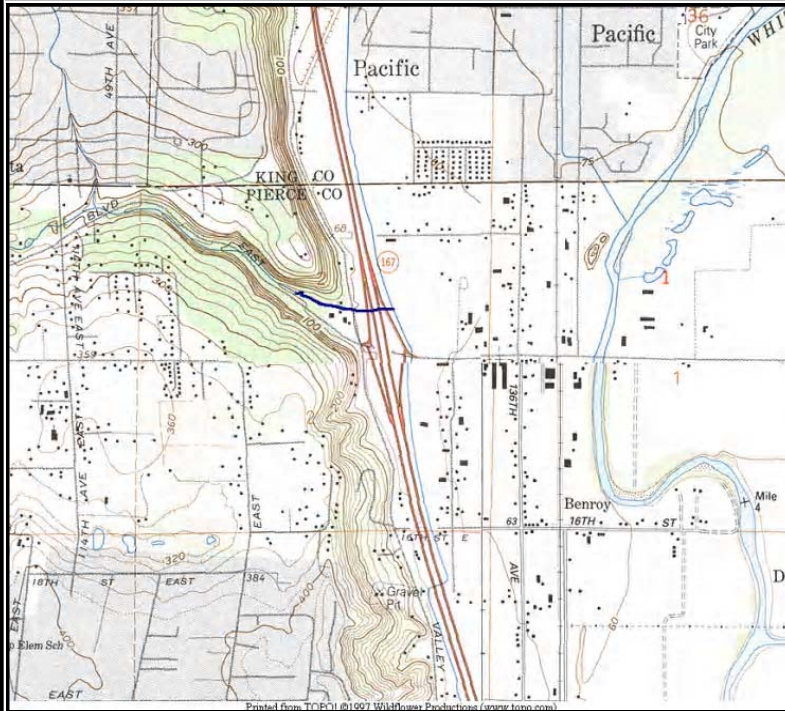
Ipsut creek looking upstream at the falls which is a barrier to any further upstream migration.



JOVITA CREEK

WRIA: 10.0033 - WHITE RIVER

2004 - 2005



Jovita creek looking downstream towards Highway 167 from RM 0.2.

River miles surveyed: 0.1 to 0.3

Dates surveyed: **NOT SURVEYED IN 2004**

Species surveyed: Coho, Chum

Access

Mile 0.2: Take the 8th Street exit off HYW. 167 and head West until the East Valley Highway. There is a bridge crossing Jovita approximately 0.2 miles North of 8th Street.

DESCRIPTION

Jovita creek is a small urban stream flowing just West of Highway 167 and South of Pacific. Jovita creek does not flow directly into the White River, yet rather it empties into a drainage ditch which travels along HYW. 167 South, for approximately 3.4 miles until it reaches the White River. Chum and coho have been observed in the past within the 0.2 mile survey segment of Jovita. However, the escapement numbers rarely warrants the effort

to survey this creek with any regularity. Spot checks are made occasionally to determine if fish are present. In addition, much of the creek channel is difficult to observe due to the heavy growth of reed canary grass and salmonberry along its banks.

The channel just above and below the East Valley bridge has little complexity and is moderately low gradient as well as somewhat incised. The riparian flora consists of reed canary grass, willow and alder, with a section of bamboo along a landowners property. There is some suitable spawning habitat for coho and chum, unfortunately most of the substrate is very compacted with large amounts of fine material and some smaller gravel. The creek passes through a culvert before reaching the drainage ditch. Above RM 0.3 the gradient increases as the creek runs along Jovita Blvd. for the next 0.6 miles, within this span the creek passes through three culverts where Jovita Blvd. intersects the creek channel.



KAPOWSIN CREEK

WRIA: 10.0600 - PUYALLUP RIVER

2004 - 2005



Chinook salmon spawning just upstream from the Orville Rd. bridge (2004).

DESCRIPTION

Kapowsin creek originates from Kapowsin lake, approximately 3.2 miles upstream from its confluence with the Puyallup River. The creek host several adult species including; chinook, coho, steelhead and occasionally a few chum. Chinook have not been observed beyond the top of Kapowsin creek where it enters the lake. Significant numbers of coho, and occasionally a few steelhead move through Kapowsin lake into Ohop creek to spawn. Many of the coho that spawn in Kapowsin are from the upper Puyallup acclimation ponds (Cowskull and Rushingwater) or are descendants of the net-pen acclimation project in Kapowsin Lake. From 1993 to 1997, the Puyallup Tribe fisheries staff transported juvenile coho from WDFW's

River miles surveyed: 0.0 to 3.2

Dates surveyed: 8/16/04 to 6/6/05

Species surveyed: Chinook, Coho, Steelhead

Access

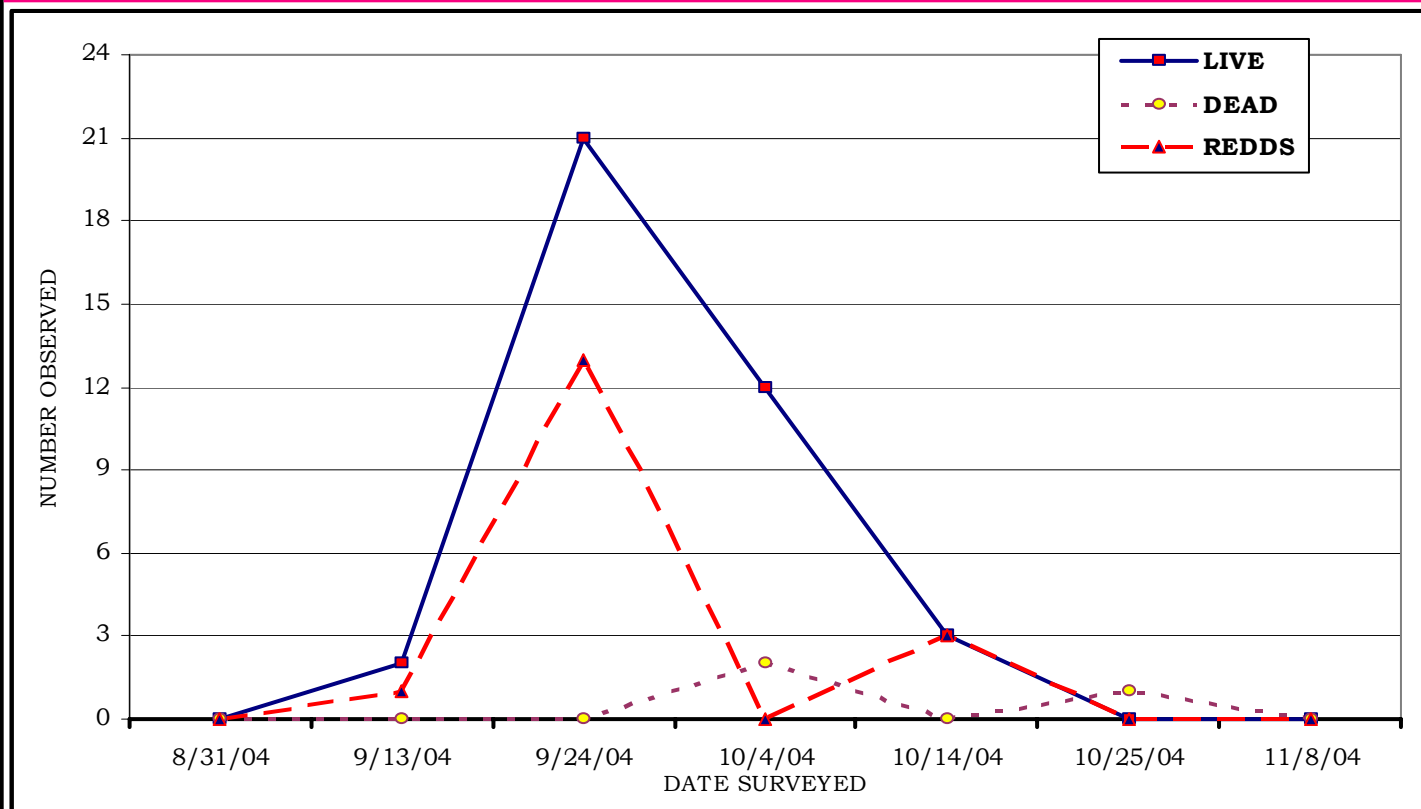
Mile 3.2: Take Hwy. 162 past Orting and turn right onto Orville Road (Crocker Grange). After crossing the Puyallup River, continue another 4 miles to a bridge near the main gate to Champion Timberlands.

Voights creek hatchery to four net-pens in Kapowsin lake to acclimate. Prior to this operation, few or no coho were observed in Kapowsin or Ohop creeks.

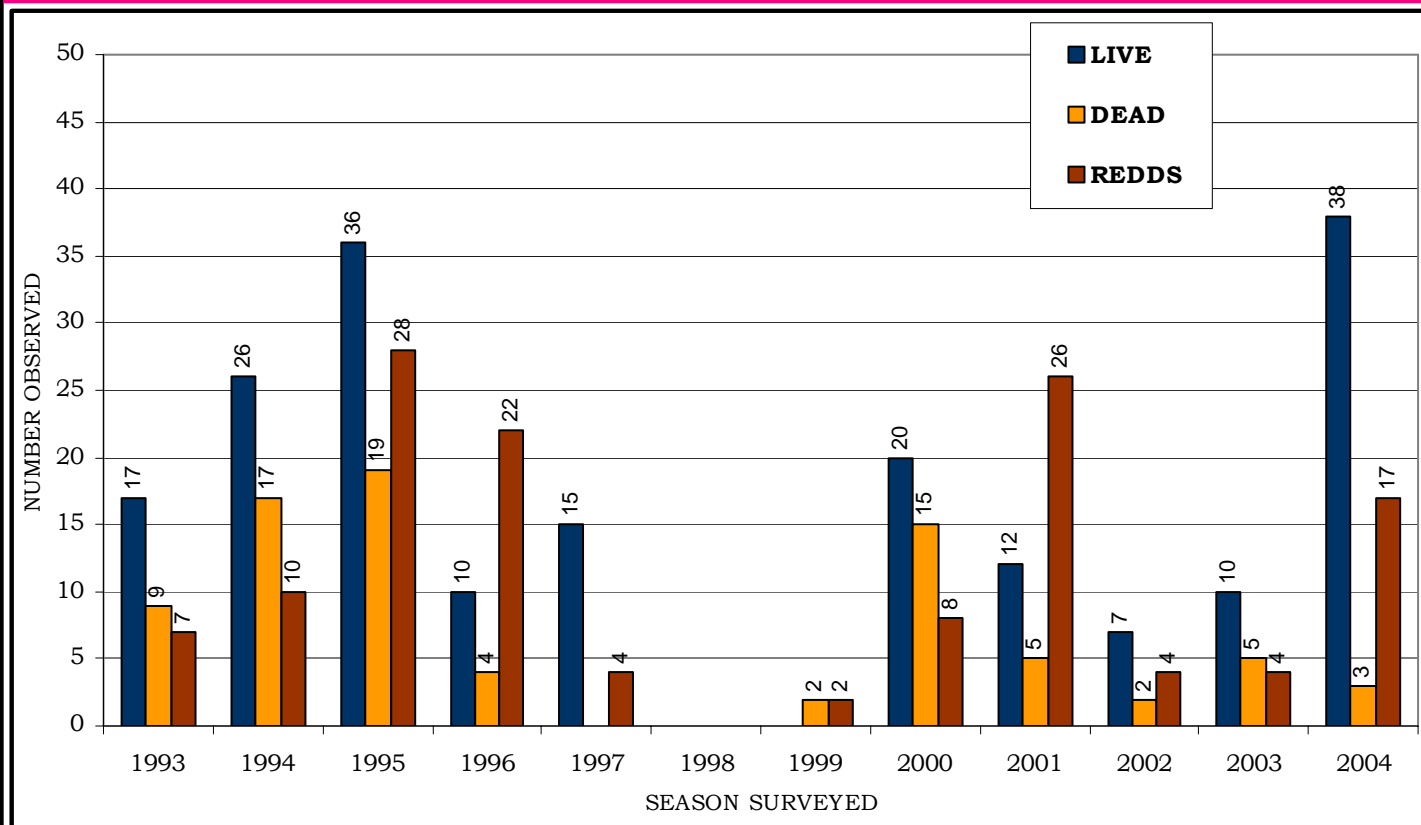
There is suitable spawning gravel throughout the 3.2 mile survey reach of Kapowsin, although much of it is patchy in nature. An abundance of downed trees within the channel along with several sizable logjams creates complexity throughout most of the stream. Cattle have been allowed access to the stream channel at approximately RM 1.7. Homes and outbuilding are present within 20 to 40 feet of the banks along the creek between RM 0.5 and RM 2.0. Human-made rock structures, as well as sill logs, span the creek and alter the channel along this stretch. During the summer and fall when water levels are low, these structures often cause upstream migration issues for adult salmon. Most of the stream has a dense riparian zone consisting of firs, alders and salmonberries. Pierce County is currently working on replacing the Orville road bridge over the head of Kapowsin creek.



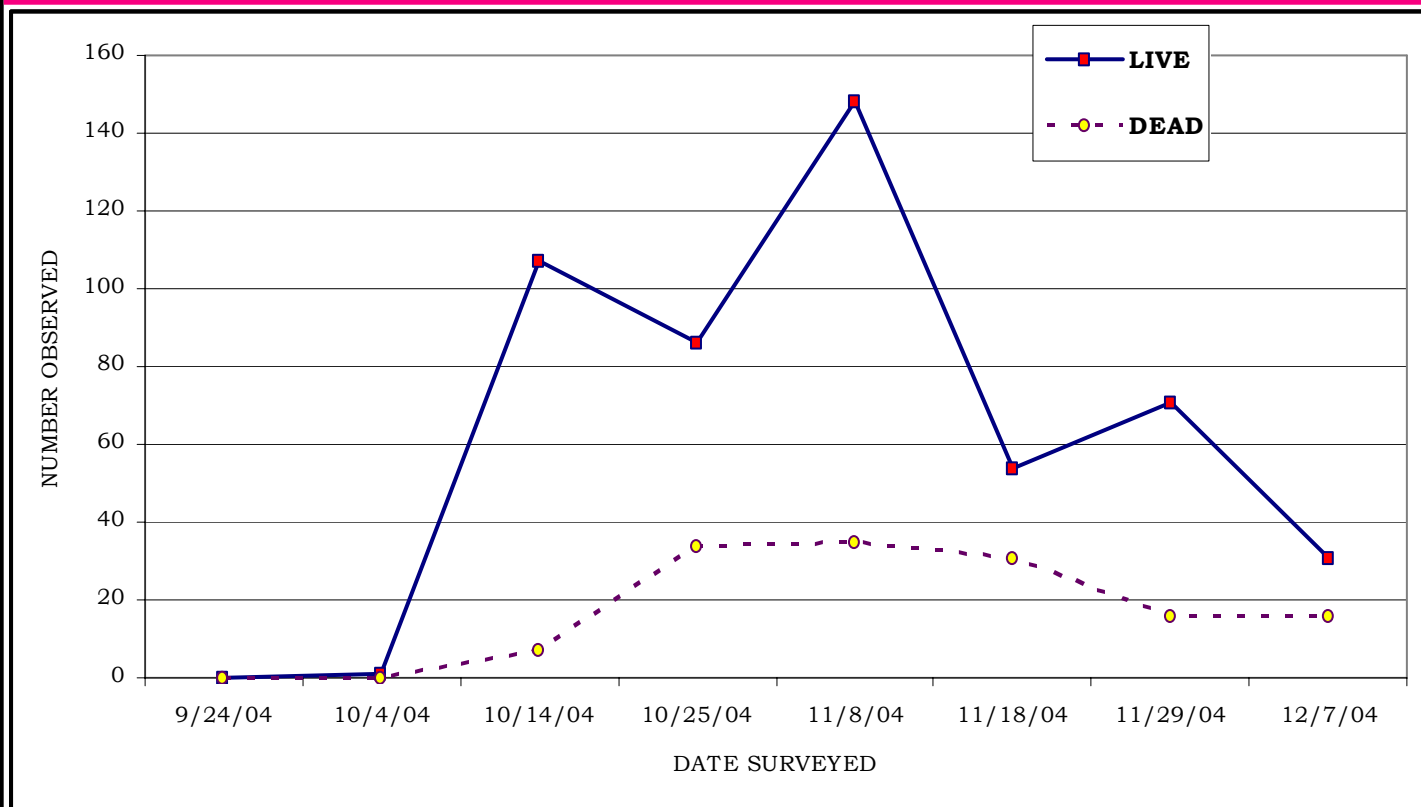
2004 KAPOWSIN CREEK CHINOOK COUNTS



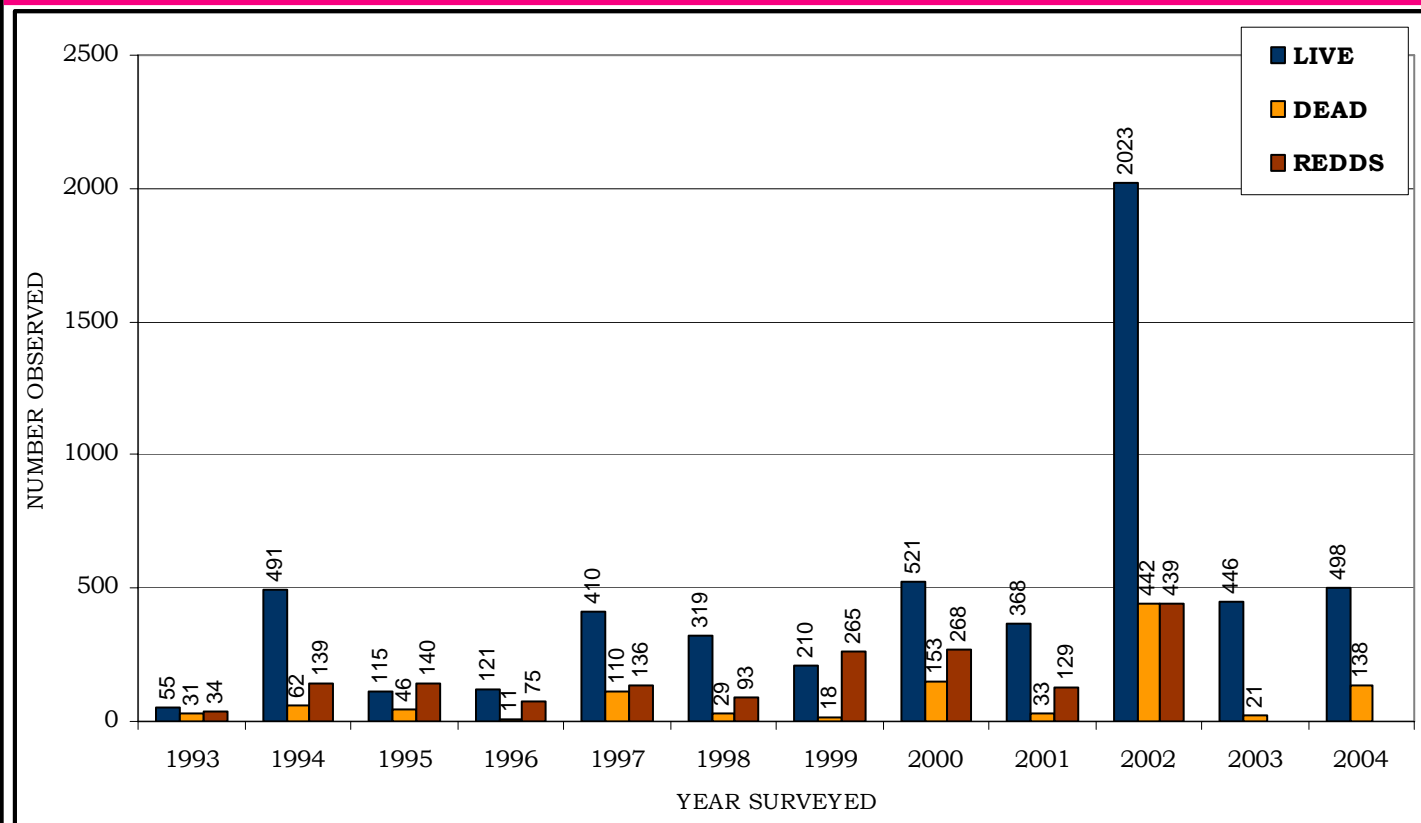
KAPOWSIN CREEK CHINOOK SEASON COMPARISONS (1993 - 2004)



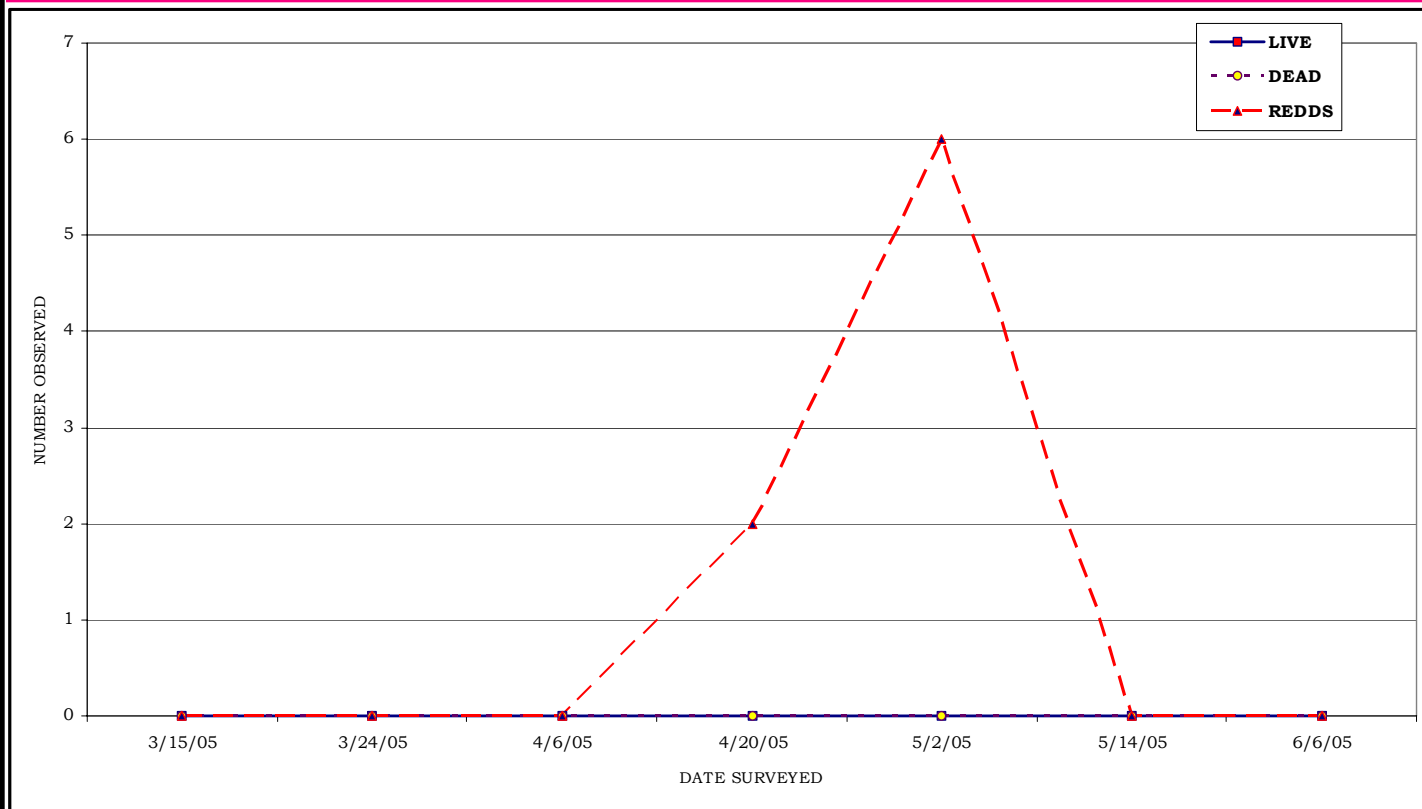
2004 KAPOWSIN CREEK COHO COUNTS



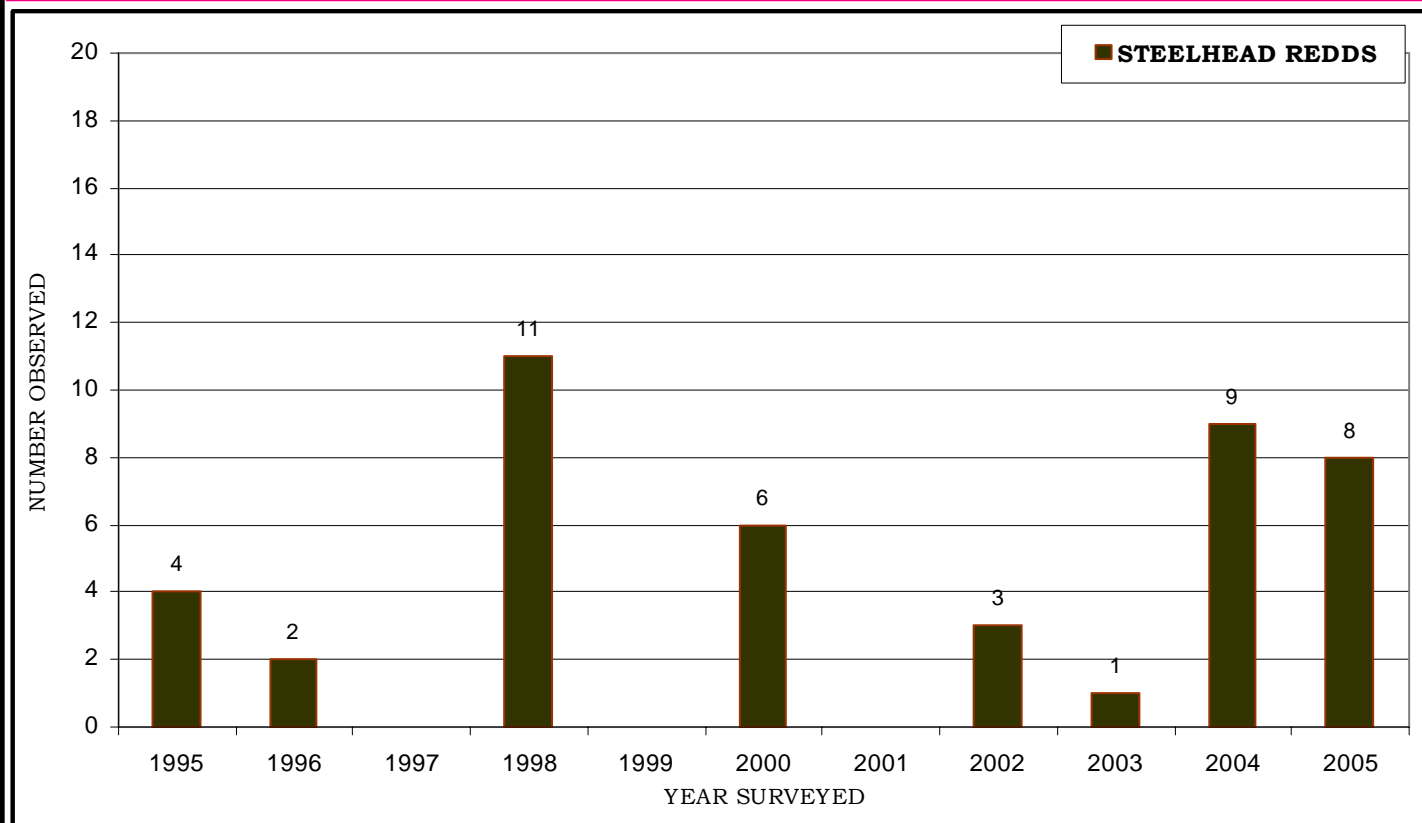
KAPOWSIN CREEK COHO SEASON COMPARISONS (1993 - 2004)



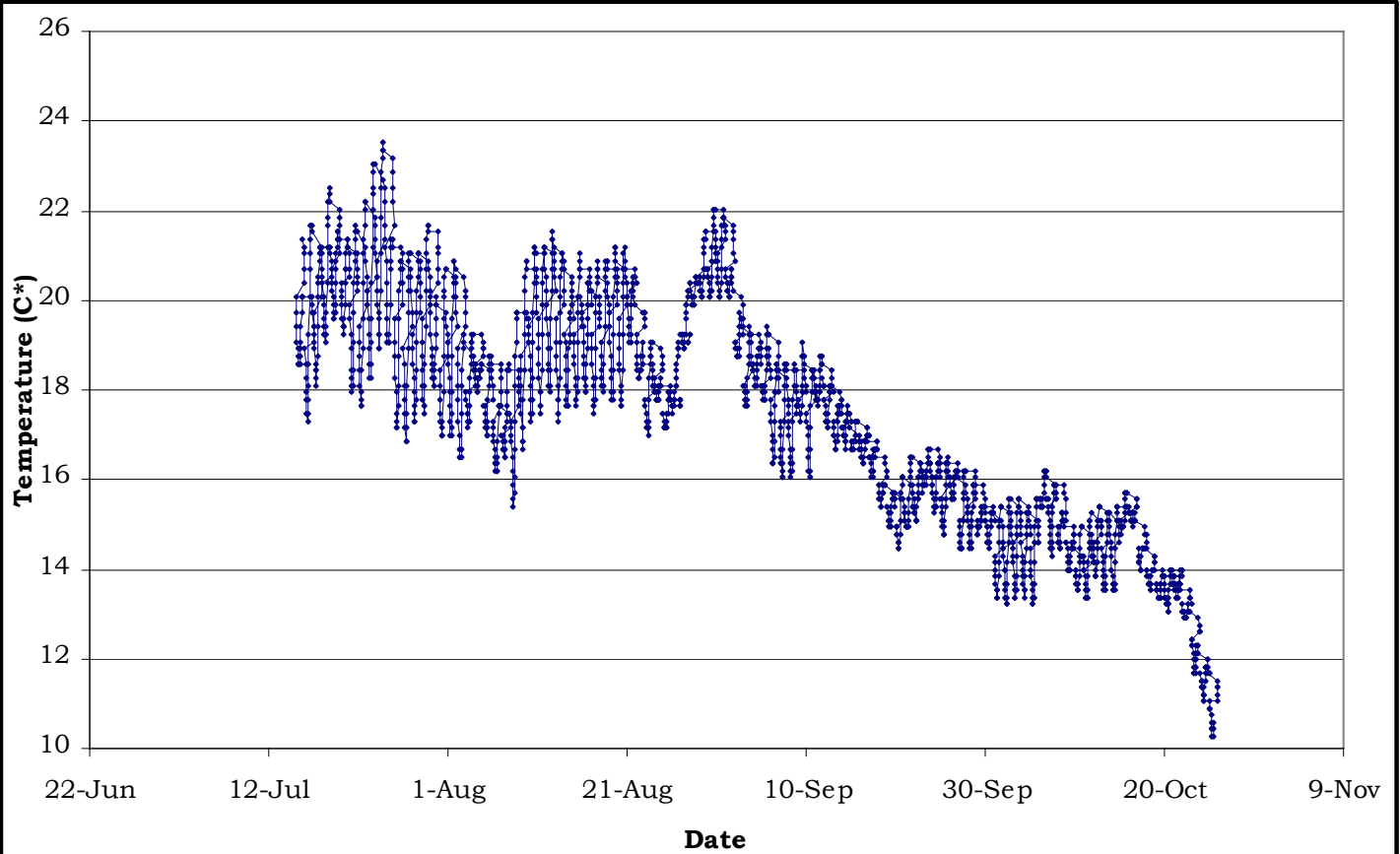
2005 KAPOWSIN CREEK STEELHEAD COUNTS



KAPOWSIN CREEK STEELHEAD SEASON COMPARISONS (1995 - 2005)



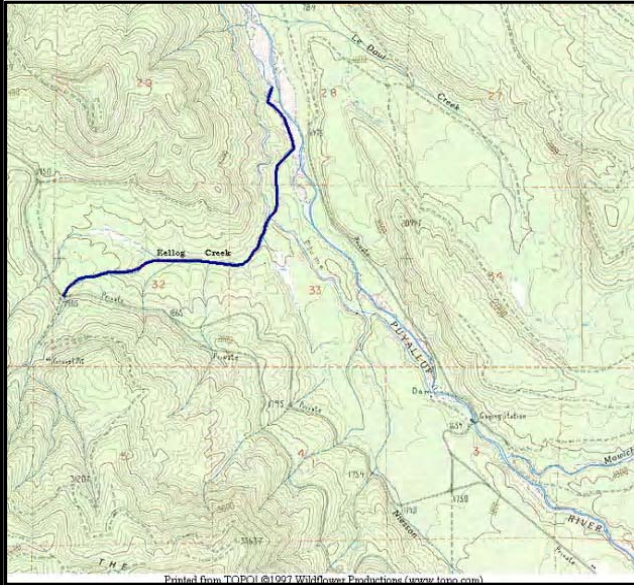
2004 KAPOWSIN CREEK TEMPERATURE MEASURED AT RIVER MILE 1.5



KELLOG CREEK

WRIA: 10.0621 - PUYALLUP RIVER

2004 - 2005

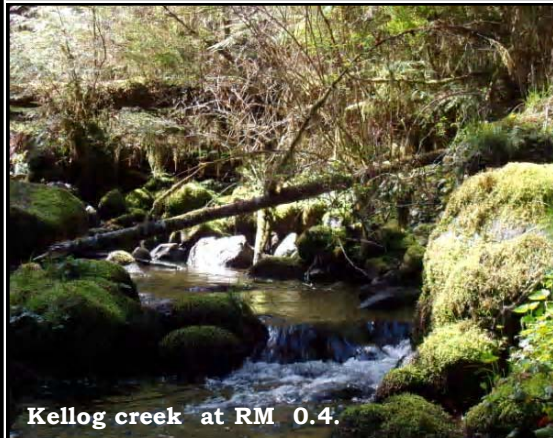


Typical habitat found in the lower reach of Kellog creek.

River miles surveyed: 0.0 to 2.0/2.5
Dates surveyed: 10/13/04 to 5/26/05
Species surveyed: Coho, Steelhead

Access

Mile 2.0: The Kapowsin tree farm's mainline crosses Kellog creek at the 8 Rd. junction. To survey this reach and not double walk you must cross the mainstem Puyallup at the Kellog confluence and walk downstream 0.5 miles and up 0.3 miles of LeDout creek to the 62 Rd.



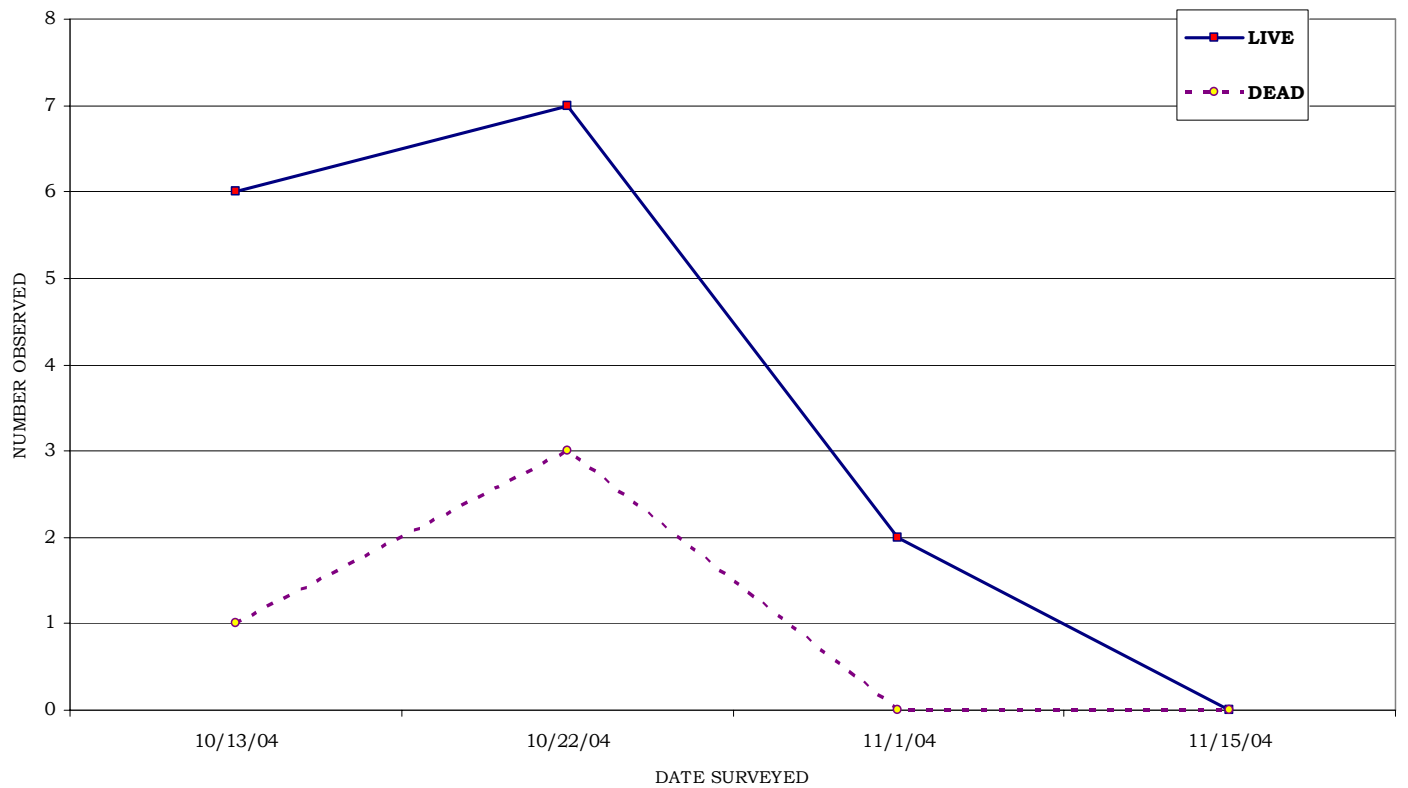
Kellog creek at RM 0.4.

DESCRIPTION

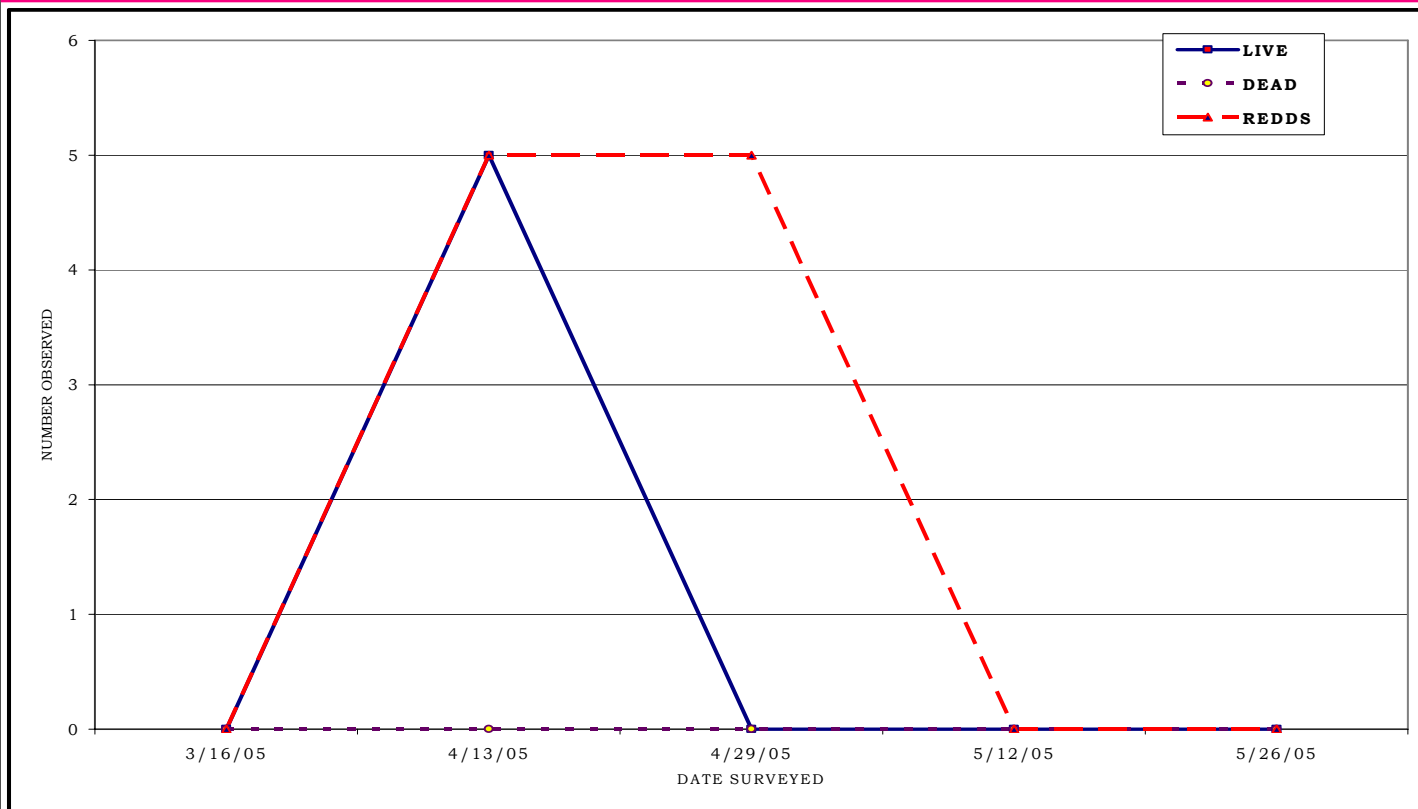
Kellog creek is a tributary to the upper Puyallup River, entering the Puyallup around RM 39.7. Anadromous usage extends from the mouth, up to RM 2.5 where the creek passes under the mainline road that runs through the Rainier Timber-Kapowsin tree farm (Campbell Group LLC). From the top of the survey at RM 2.5 to 1.6 the creek flows through a moderate gradient step-pool channel with patchy gravel. At approximately RM 0.9, the creek passes under PSE's diversion flume. The riparian zone consists of a thin mature 2nd growth conifer buffer on both sides. There is a large amount of wind-throw in the channel associated with this buffer. Below this, the gradient eases and excellent spawning gravel is consistently available all the way to the confluence with the Puyallup River. The point of convergence between Kellog creek and the Puyallup River can change depending on the flow in the Puyallup. The Kellog creek channel initially hits a side channel in the Puyallup River which is often dry. Kellog then flows down the Puyallup River side channel for approximately 0.5 miles before dumping into the main river channel. Steelhead and coho spawning activity is often seen in this stretch. The riparian area is more intact through the lower 1.5 miles, similar to above but no recent harvest activities have compromised it.

Naturally returning coho were observed in Kellog creek in 2004. These were the first natural spawners seen since adult and juvenile coho plants began in the upper Puyallup basin in 1997. Coho activity was observed as high as RM 1.4, whereas steelhead activity is often observed as high as RM 2.1. Due to the fact that Kellog creek is downstream of the Electron diversion dam, and flows over the past century have often been high enough during late winter and spring to prevent the mainstem channel of the Puyallup River from being drawn dry, wild steelhead have continued to maintain a small foothold in Kellog creek.

2004 KELLOGG CREEK COHO COUNTS



2005 KELLOG CREEK STEELHEAD COUNTS



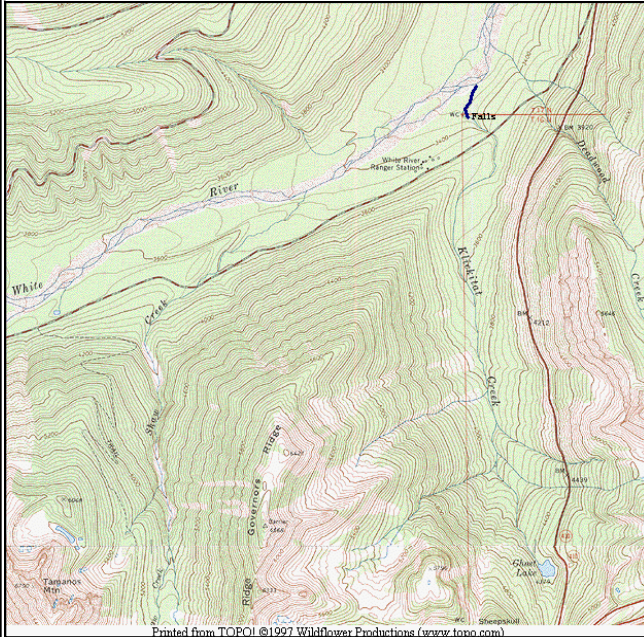
KELLOG CREEK STEELHEAD SEASON COMPARISONS (1995 - 2005)



KLICKITAT CREEK

WRIA: 10.0357 - WHITE RIVER

2004 - 2005



Typical habitat throughout Klickitat creek. The location in the photo is about 20 meters above the confluence with the White river.



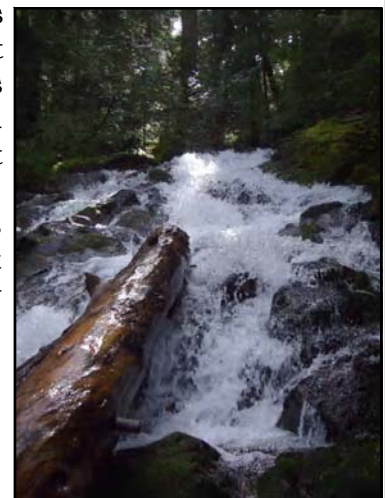
River miles surveyed: 0.1 to 0.3
Dates surveyed: 9/8/04 to 10/7/04
Species surveyed: Bull trout (Char)
Access
Mile 0.3: Turn onto the Sunrise rd off of HWY 410 in Mt. Rainier National Park. A bridge crosses Klickitat creek in approximately 2 miles.

DESCRIPTION

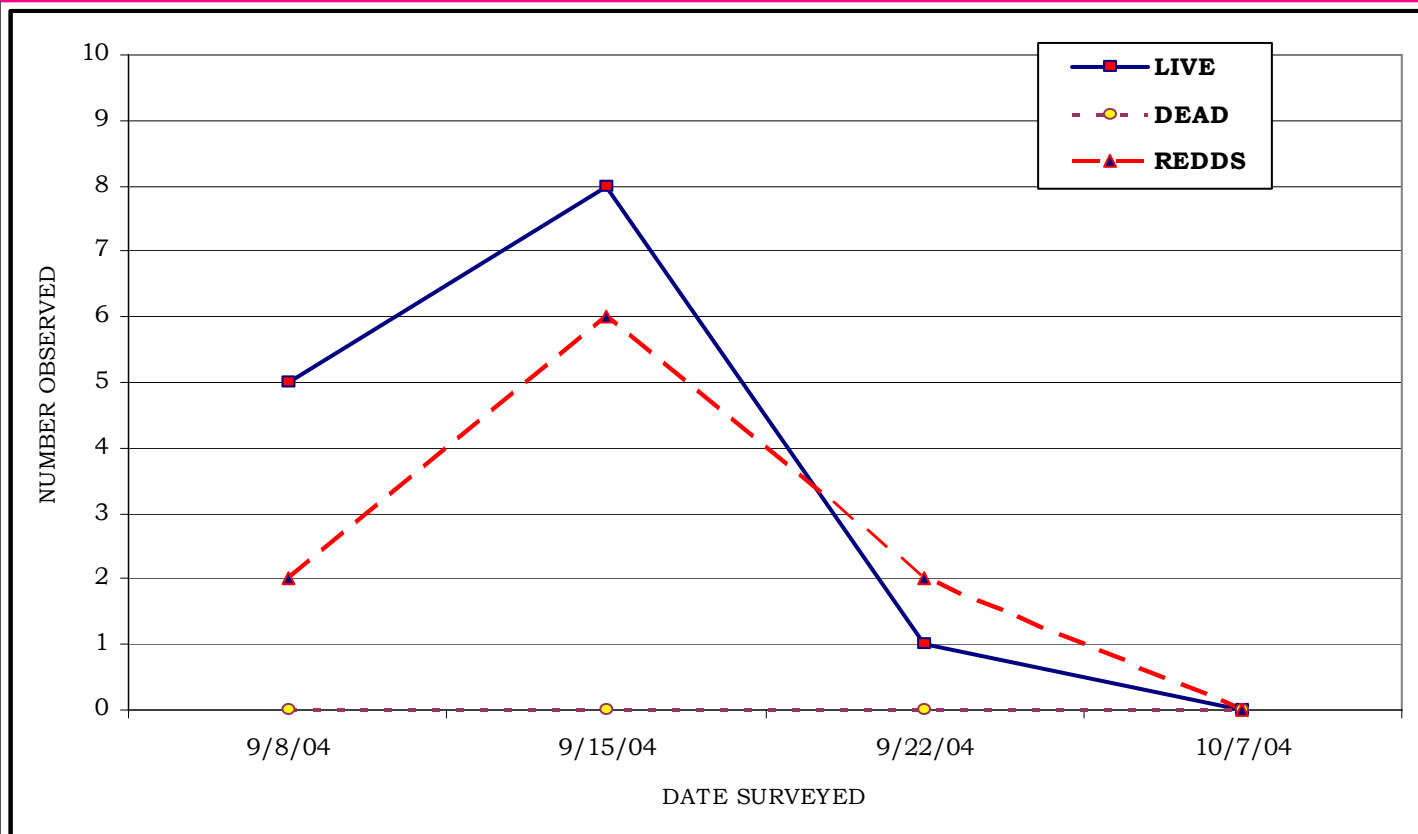
Klickitat creek is a small right bank tributary to the upper White River. The creek is mainly surveyed for bull trout in September, although spot checks are made from October through November for coho and pinks. However, the creeks 3300' elevation is likely too high for most salmonids. Klickitat creek is a phenomenal stream, originating from Ghost lake and surrounding runoff, it flows entirely within Mt. Rainier National Park and is the source of drinking water for the NPS White River compound. Klickitat enters the White River north of Sunrise road at approximately RM 67.9. The creek is surrounded by old growth and is tempered by cold clean water year round. The only drawback is that there is only about 0.3 miles of anadromous usage. Klickitat provides exceptional habitat conditions for bull trout (char) and cutthroat rearing and spawning. The first 0.3 miles is low gradient with excellent spawning gravel and large amounts of LWD. Numerous deep pools and side channels provide excellent



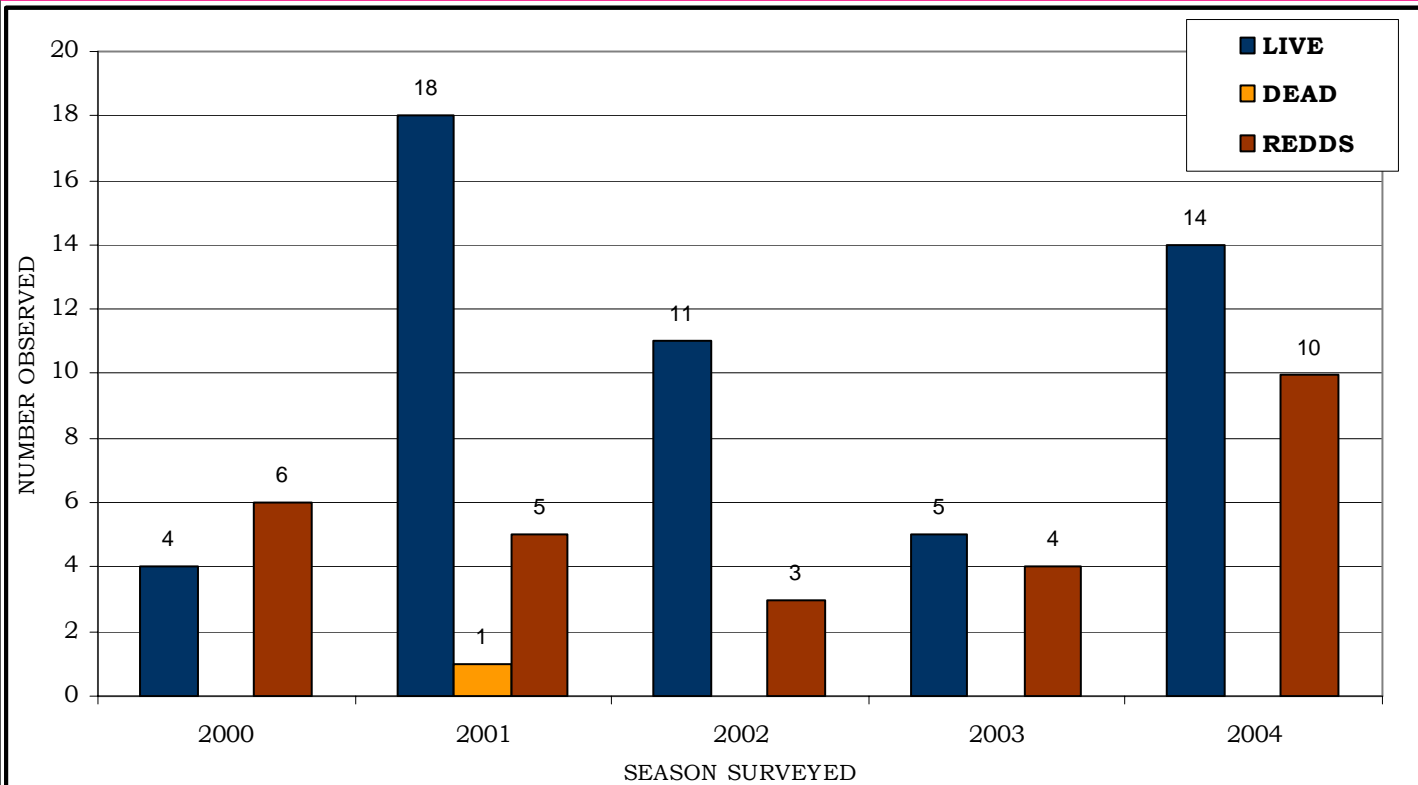
habitat for juvenile fish. A series of bedrock falls and cascades at RM 0.3 blocks any further upstream migration (right photo). Klickitat creek has been surveyed since 1999, but no salmon have been seen. Bull trout from the mainstem White River are observed spawning in the creek early in the fall, and juvenile bull trout have been observed in the pools and lateral habitat during these surveys. During the 2002, 2003 and 2004 survey seasons, char floy tagged at the USACE trap in Buckley were observed spawning in the creek. The char in the left photo were observed in 2003, the green floy tag is visible near the dorsal fin.



2004 KLIKITAT CREEK CHAR COUNTS



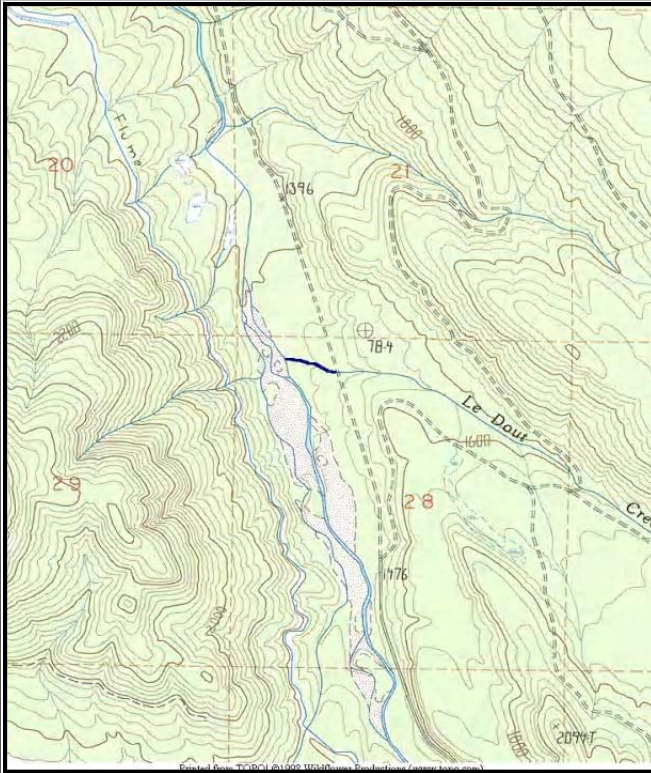
KLIKITAT CREEK CHAR SEASON COMPARISONS (2000 - 2004)



LEDOUT CREEK

WRIA: 10.0620 - PUYALLUP RIVER

2004 - 2005



The confluence of LeDout creek and the Puyallup River. LeDout creek runs along the left side of the photo, the Puyallup along the right.



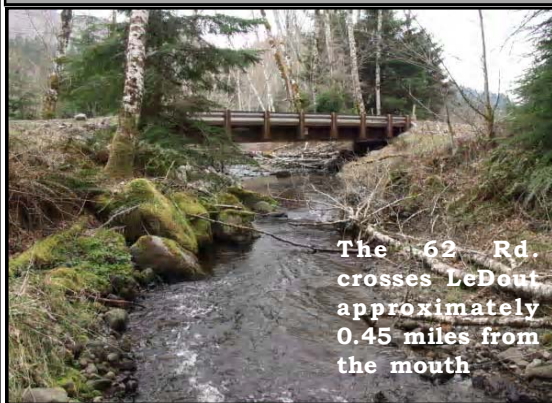
DESCRIPTION

LeDout creek is a small tributary to the upper Puyallup River, entering the main stem river channel at RM 39.2. This puts the mouth of LeDout about 2.6 miles below the Electron diversion dam on the Puyallup River. LeDout is a stream with moderate complexity, where limited numbers of coho and steelhead return to spawn in each season. Since the creek is downstream of the Electron diversion dam, and river flows over the past century have often been high enough during late winter and spring to prevent the mainstem channel of the Puyallup River from being drawn dry, wild steelhead have managed to maintain a small foothold in LeDout creek. The substrate throughout most of LeDout consist of small and large cobble, however, patches of good spawning gravels are frequent and the channel habitat consists mostly of low gradient pools and riffles. LeDout is often too shallow in late summer to allow chinook access to spawn. The creek contains a substantial proportion of small



River miles surveyed: 0.0 to 0.45
Dates surveyed: 10/13/04 to 5/26/05
Species surveyed: Coho, Steelhead
Access

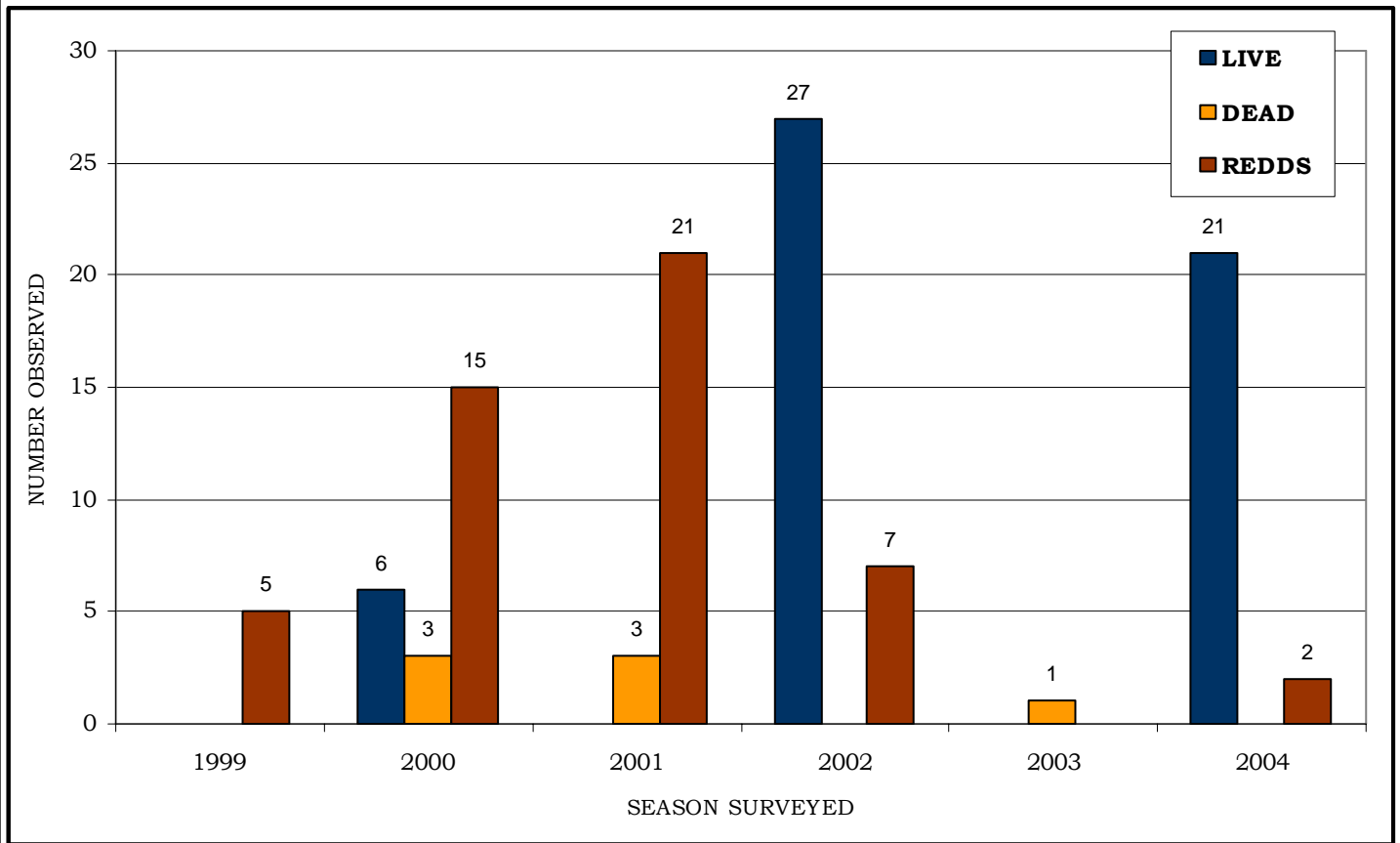
Mile 0.3: The 62 Rd. crosses LeDout approximately 0.3 mile from the mouth. This stream is used as a take out for the Kellogg creek survey.



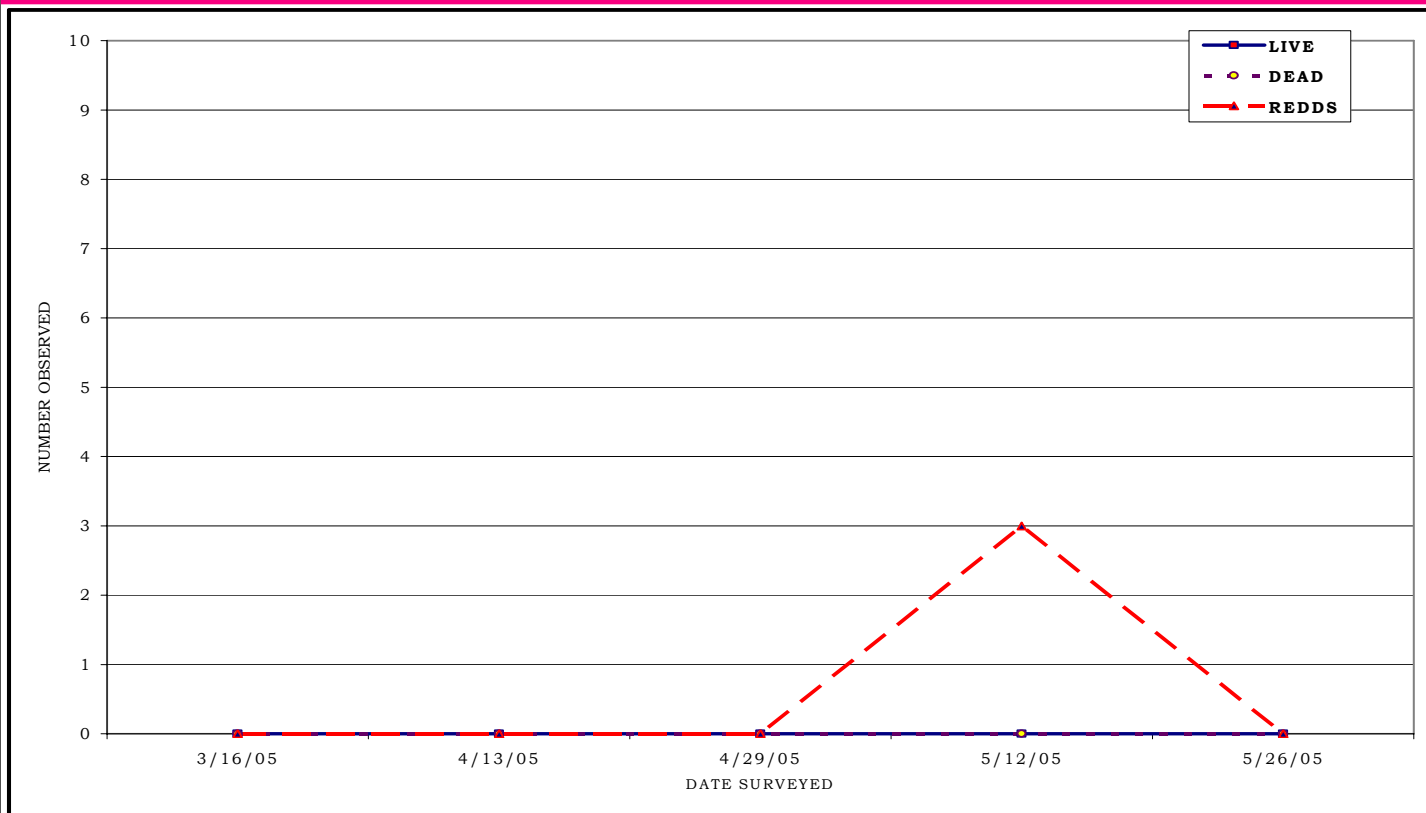
The 62 Rd. crosses LeDout approximately 0.45 miles from the mouth

and medium size woody debris, and the surrounding riparian zone consist mostly of alder and Douglas fir. Although there has been logging activity near the creek in the past, a good buffer zone exist along the majority of the creek. A split in the channel and an increase in gradient at RM 0.45 often prevents adult fish from migrating further upstream. The 62 Rd. crosses LeDout creek approximately 0.45 miles from its confluence with the Puyallup River (left photo).

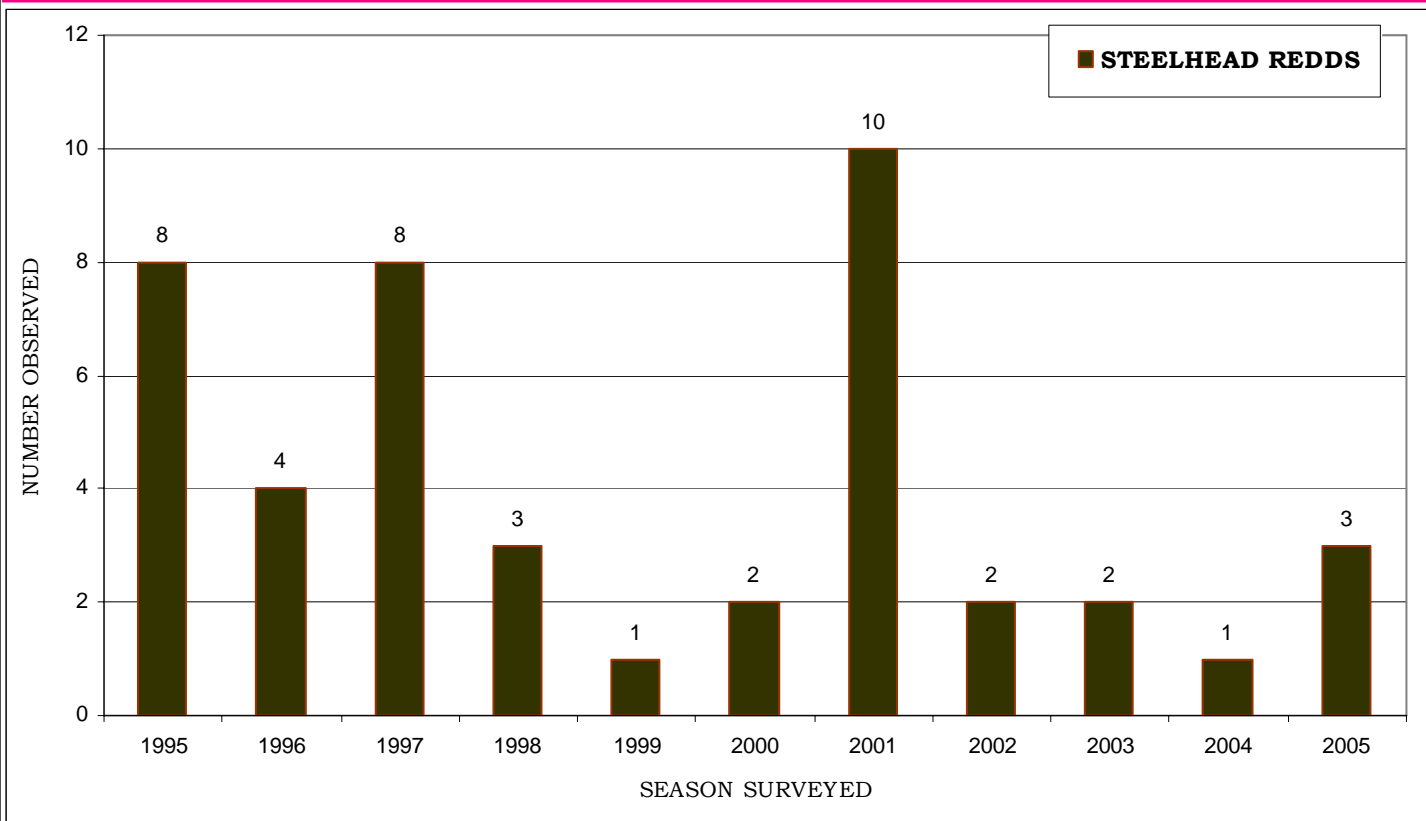
LEDOUT CREEK COHO SEASON COMPARISONS (1999 - 2004)



2005 LEDOUT CREEK STEELHEAD COUNTS



LEDOUT CREEK STEELHEAD SEASON COMPARISONS (1995 - 2005)



MEADOW CREEK

WRIA: 10.0630 - PUYALLUP RIVER

2004 - 2005

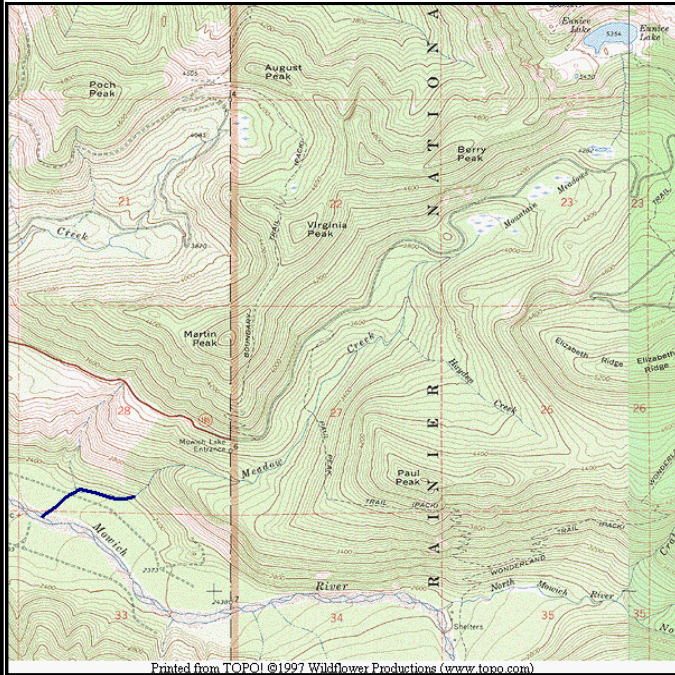
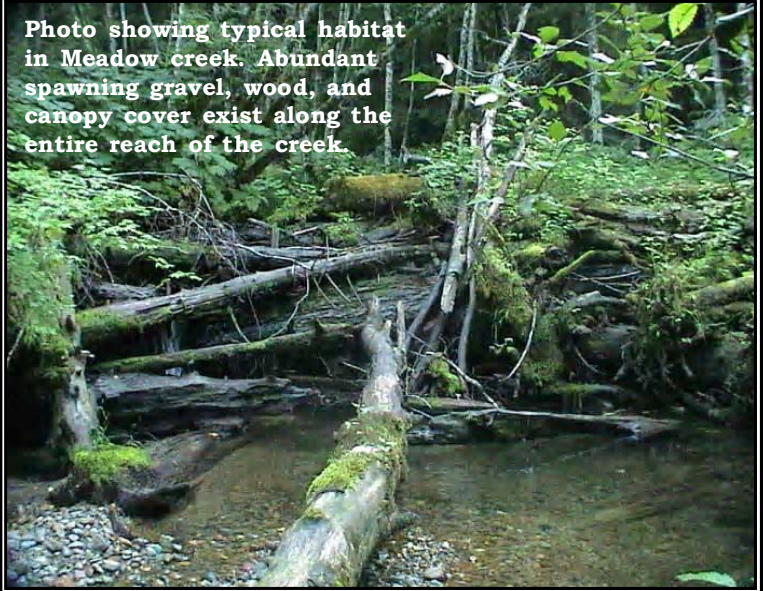


Photo showing typical habitat in Meadow creek. Abundant spawning gravel, wood, and canopy cover exist along the entire reach of the creek.



DESCRIPTION

Meadow creek is a tributary to the Mowich River, entering the Mowich at RM 3.9. Meadow originates from Eunice Lake, deep within Mt. Rainier National Park. The creek flows through a high gradient, frequently confined channel for most of its 4.6 mile length. Meadow creek has one significant tributary, Hayden creek, at RM 2.5. However, the lower mile of the creek has a low to moderate gradient, with a pool-riffle character, abundant spawning gravel, LWD, and riparian cover along the entire channel. Several pieces of LWD along with stable log jams have created remarkable stream complexity throughout the lower reach of the creek.

Meadow creek is pristine in many ways, but its location high in the watershed above the Electron diversion dam has prevented salmon and steelhead from accessing and utilizing this stream for over a century. The creek does however, have a resident population of cutthroat trout. It is also suspected that char may be

River miles surveyed: 0.0 to 0.5
Dates surveyed: **Not surveyed in 2004**
Species surveyed: Chinook, Coho, Char, Steelhead

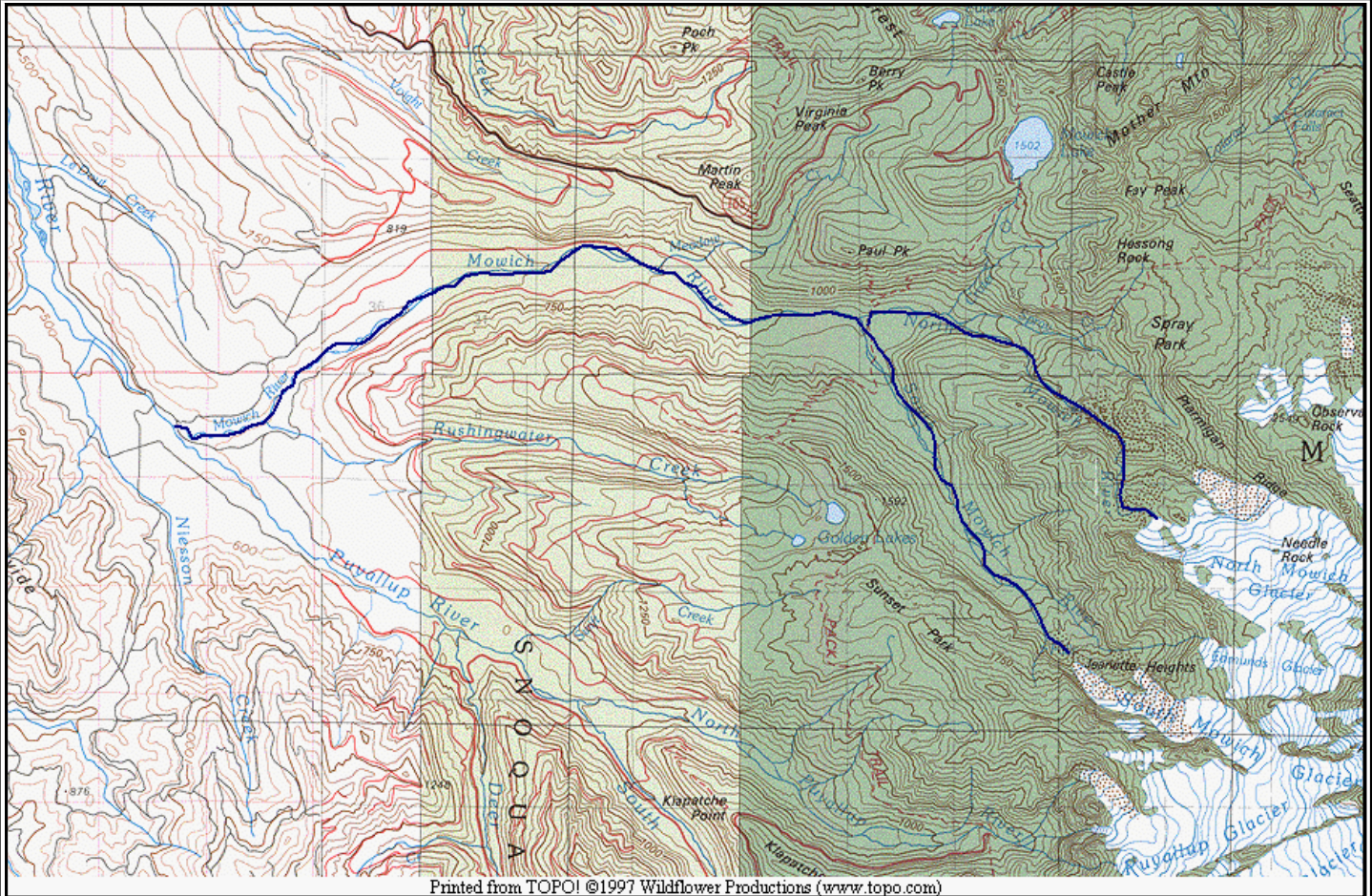


present in the creek, since they are known to populate the Mowich River, but no char have not been documented to date. Due to the absence of anadromous usage, Meadow creek is only surveyed and snorkeled a couple times a year to determine if salmon or steelhead are repopulating the stream. Unfortunately, adult chinook and coho plants are not possible since there is no vehicle access within a half mile of the creek. Therefore, one of the Puyallup Tribes short term goals is to reintroduce chinook and possibly coho via remote site incubators (RSI). The obvious need for RSI's is due to the limited accessibility to the creek. Upwards of 40,000 chinook and coho could be incubated and released into the creek annually. Currently, there are no proposals for reintroducing steelhead into Meadow creek or the Upper Puyallup system. Yet, the need for action is paramount due to the steeply declining stock of wild steelhead in the Puyallup Watershed.

MOWICH RIVER

WRIA: 10.0624 - PUYALLUP RIVER

2004 - 2005



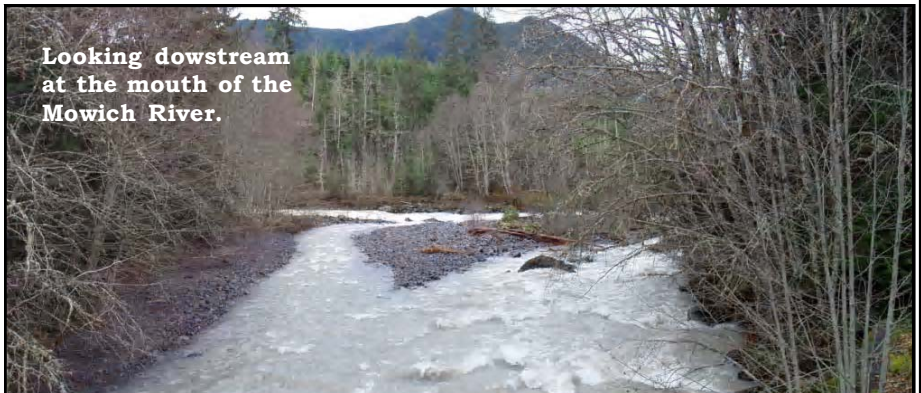
DESCRIPTION

The Mowich River converges with the Puyallup River at RM 42.3, this is approximately 0.5 miles above the Electron diversion dam. The glacial headwaters of the Mowich River originate from the Edmunds, and the North and South Mowich glaciers on the west slope of Mt. Rainier. Significant tributaries to the Mowich include; Crater, Spray, Meadow and Rushingwater creeks. The North and South Mowich forks flow through Mt. Rainier National Park and reach their confluence at RM 7.5 to form the main stem Mowich River. The upper 4-5 miles of the Mowich River consist of steep and moderate gradients, with a largely cobble and boulder substrate. There is little spawning habitat available, yet some suitable spawning conditions exist in the outlying side channels below RM 7.5. The active channels of the North and South Mowich are bordered by

River miles surveyed: 0.0 to 6.0

Dates surveyed: **Not surveyed in 2004**

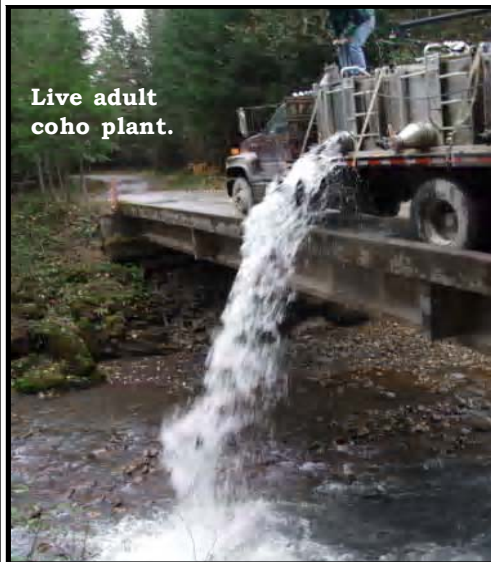
Species surveyed: Chinook, Coho, Char, Steelhead



Looking downstream
at the mouth of the
Mowich River.

large dense conifer forests and mixed deciduous trees.

From RM 6.5 to 3.1, the Mowich flows through the Snoqualmie National Forest where the river is comprised of more complex habitat. The gradient decreases along this reach, resulting in a more pool-riffle character where smaller spawning substrate is deposited and resting pools are available for upstream migrants. The lower three mile of the river flows through the Rainier Timber-Kapowsin tree farm (Campbell Group LLC). Most of the lower three miles of the channel becomes confined and narrowed by the steepening valley walls. However, much of the channel retains its complexity and spawning opportunities are abundant for both salmon and steelhead. Juvenile coho have been observed as high as RM 5.0, whereas adult and juvenile char have been documented as high as RM 7.5. Of special note is the first documented spawning of naturally returning chinook in the Mowich River in 97 years. Two females on separate redds were observed spawning in the lower reach (RM 1.0) on September 7, 2001.



With the completion of the Electron fish ladder (RM 41.7) in the fall of 2000, anadromous fish passage was restored for the first time since 1904. Surplus chinook and coho salmon from Voights creek hatchery have been planted in the Mowich river (center left), and Rushingwater creek (see graph on following page) for the past several years in efforts to jump start the upper Puyallup. One of two acclimation ponds used for reintroducing coho into a 30-mile reach of the Upper Puyallup River is located just off the main channel of Rushingwater creek at RM 0.6. The pond holds 14,000 cu. ft. of water with a flow rate of 1-3 cfs., currently 40,000 to 100,000+ coho yearlings are imprinted and released from Rushingwater annually. Coho yearlings originate from Voights Creek Hatchery where they are adipose clipped and coded wire tagged. Fish are released at 20 fish per pound, for a total biomass of 10,000 pounds. There is also a natural acclimation pond on the Mowich (bottom) used for rearing fall

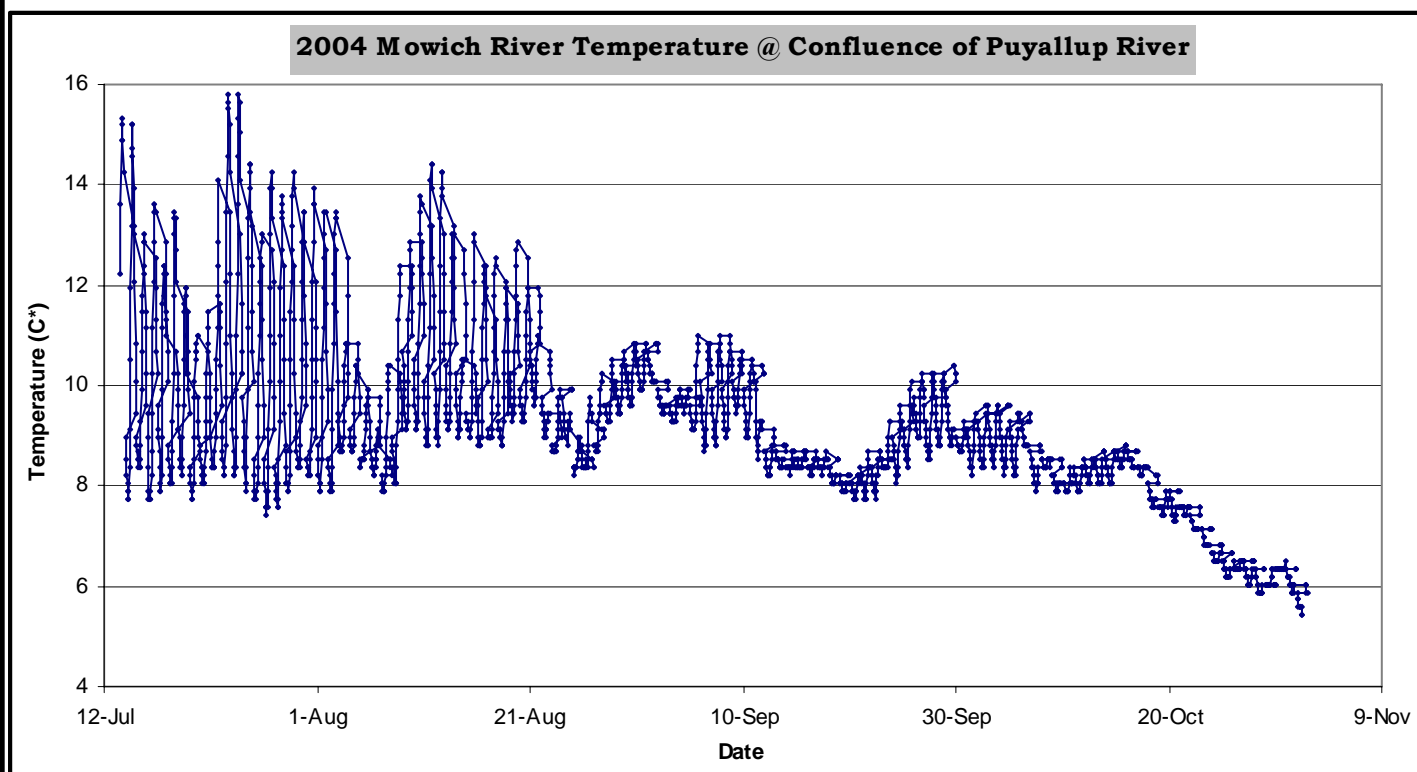
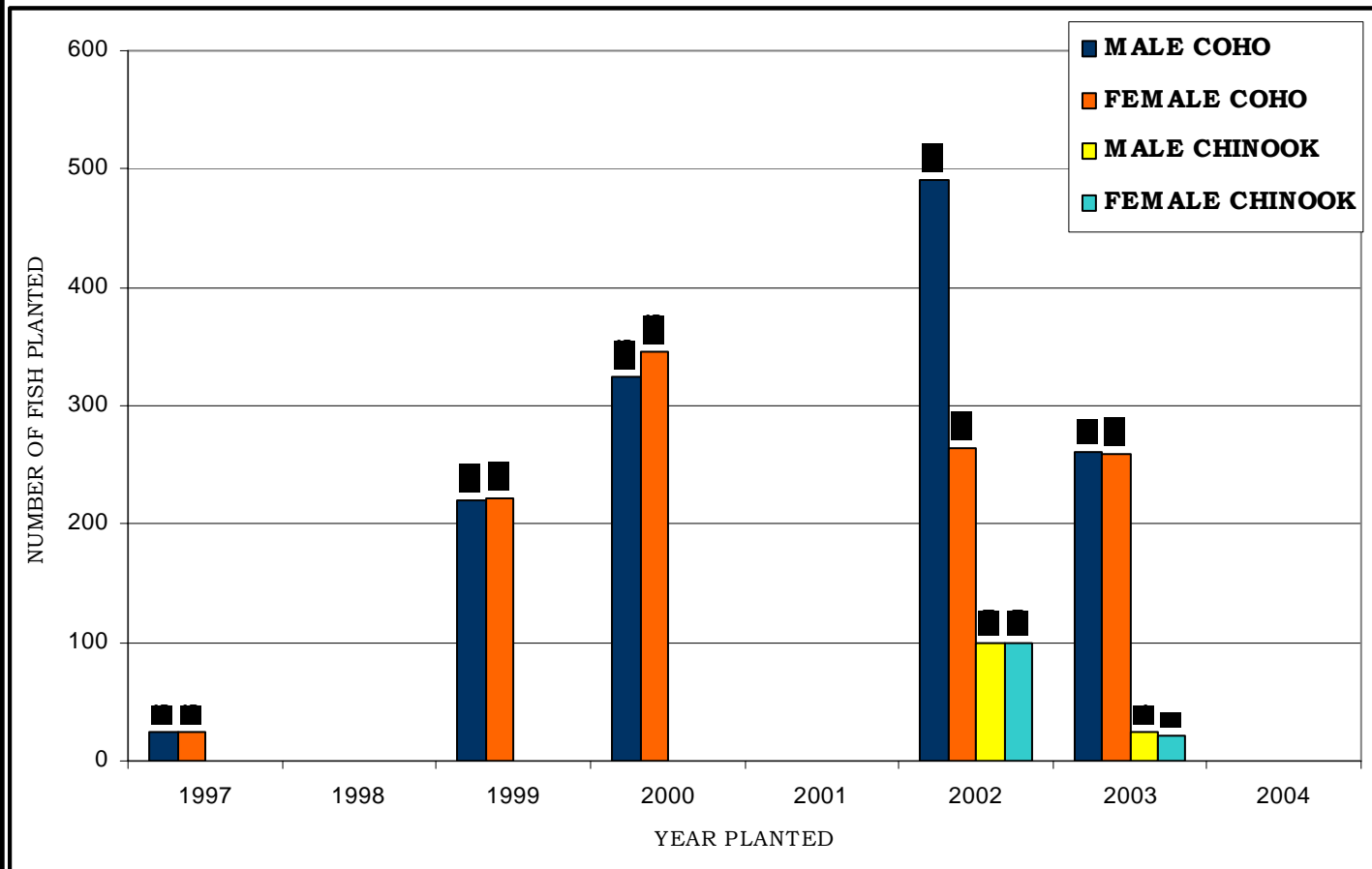
chinook, located at RM 0.1. The Puyallup Tribe's restoration goal is to rebuild depressed chinook stocks and remove them from ESA listing. Historically, fall chinook have been reared since 1980 with a variety of stocks, goals, and objectives. Using acclimation ponds, limiting harvest, and making substantial gains in habitat restoration, the tribe will be able to accomplish this task. Levee setbacks, oxbow reconnections both inter tidal and upland, Commencement Bay cleanup, and harvest cutbacks have already been initiated. Only the jump-starting of chinook in habitat areas devoid of fish is left.

Acclimation ponds are a proven method in increasing fish numbers on the spawning grounds. Hatchery rearing 200,000 fall chinook for acclimation ponds in the upper Puyallup River is a key components to restoration goals.

Natural acclimation pond used for rearing fall chinook, located at RM 0.1. Acclimation ponds are a proven method in increasing fish numbers on the spawning grounds. Hatchery rearing 200,000 fall chinook for acclimation ponds in the upper Puyallup river is a key component to restoration goals.



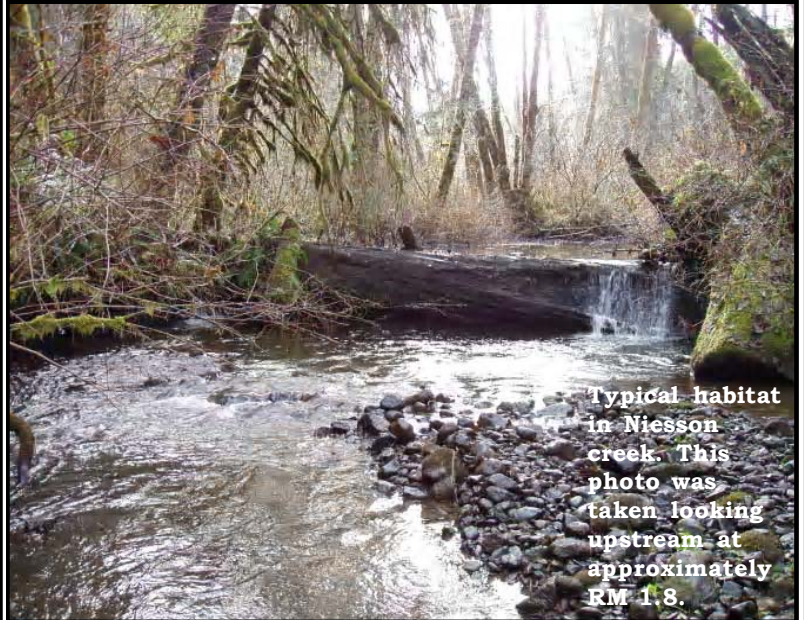
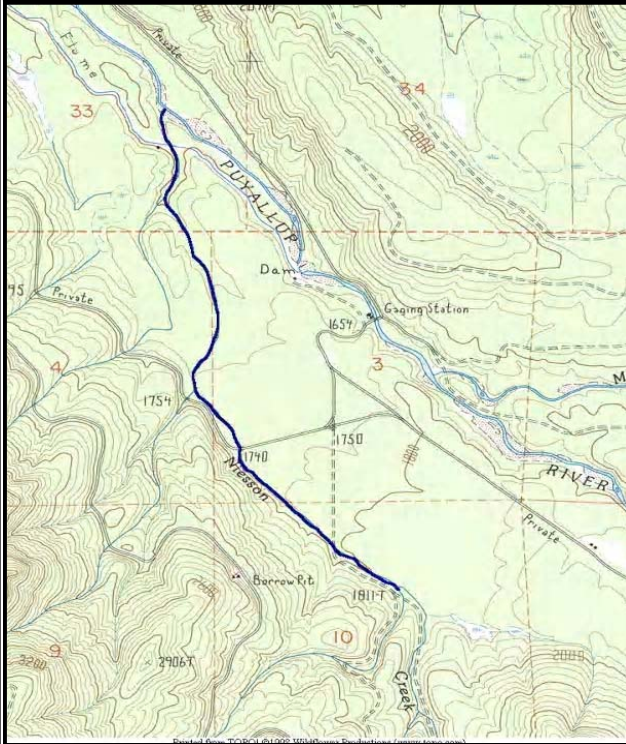
ADULT CHINOOK AND COHO SURPLUS PLANTS IN MOWICH RIVER (1997 - 2004)



NIESSON CREEK

WRIA: 10.0622 - PUYALLUP RIVER

2004 - 2005

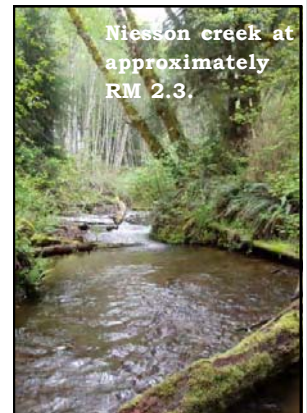


Typical habitat in Niesson creek. This photo was taken looking upstream at approximately RM 1.8.

DESCRIPTION

Niesson creek is a tributary to the upper Puyallup River. This medium sized stream varies between pool-riffle and forced pool-riffle in character and contains excellent spawning gravel throughout the 2.5 mile survey section. The riparian zone consists of conifers and alders with moderate amounts of large woody debris. Continued timber harvest activities have reduced the riparian zone to the state required minimum along several extended reaches of the lower creek.

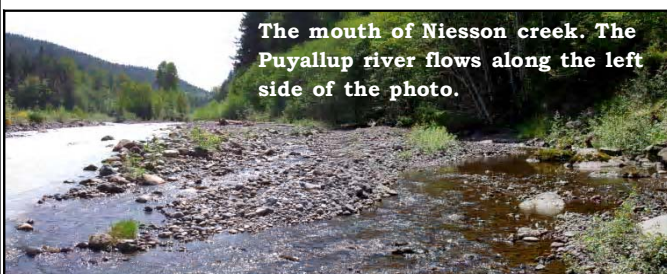
This stream is only surveyed consistently for steelhead and coho. Steelhead have been observed spawning



Niesson creek at approximately RM 2.3.

River miles surveyed: 0.0 to 2.5
Dates surveyed: 10/13/04 to 5/26/05
Species surveyed: Coho, Steelhead
Access
Mile 1.8: The Kapowsin tree farm's 2 rd. crosses Niesson creek near Moose Junction.
Mile 2.2: A short distance past the 2 rd. bridge, the 21 rd turns to the right and again crosses Niesson in 0.2 miles.

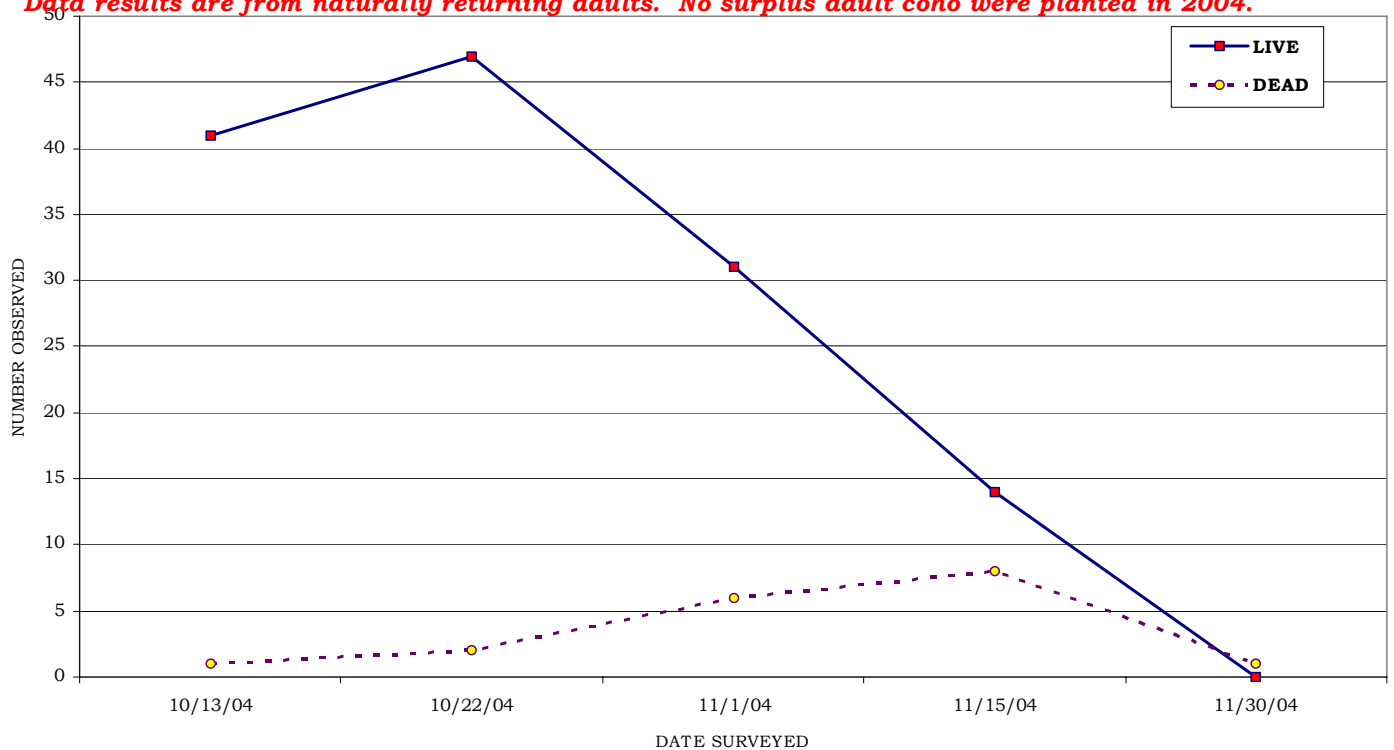
as high as RM 2.2 near the abandoned 22 Rd. Naturally returning coho were observed for the first time in 2002. The natural returns are a result of live adult plantings and juvenile acclimation projects conducted by Puyallup tribal fisheries department. Puyallup tribal fisheries staff have been transporting live surplus adult coho from the Voights creek hatchery since 1998, however, no fish were planted in 2004. Instead, naturally returning adult coho were allowed to spawn without intervention from hatchery planted coho. Future live plants may be reduced or eliminated based on the number of naturally returning spawners. Like Kellog and Ledout creek, Niesson creek is just downstream of the Electron diversion dam. Flows over the past century have often been high enough during late winter and spring to prevent the mainstem channel of the Puyallup River from being drawn dry. The winter/spring flows have allowed wild steelhead to maintain a foothold in Niesson creek. Unfortunately, escapement in Niesson has decreased significantly over the past couple of years.



The mouth of Niesson creek. The Puyallup river flows along the left side of the photo.

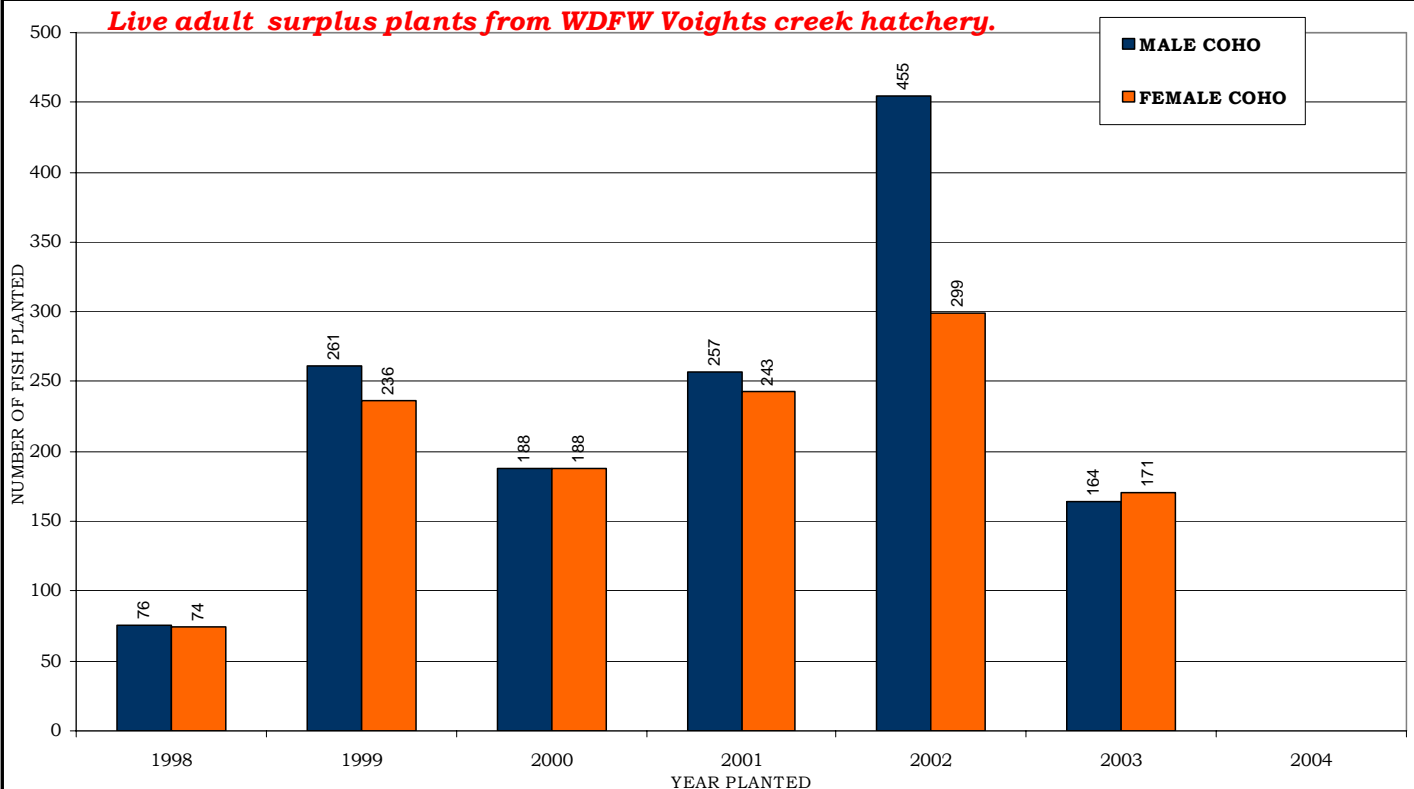
2004 NIESSON CREEK COHO COUNTS

Data results are from naturally returning adults. No surplus adult coho were planted in 2004.

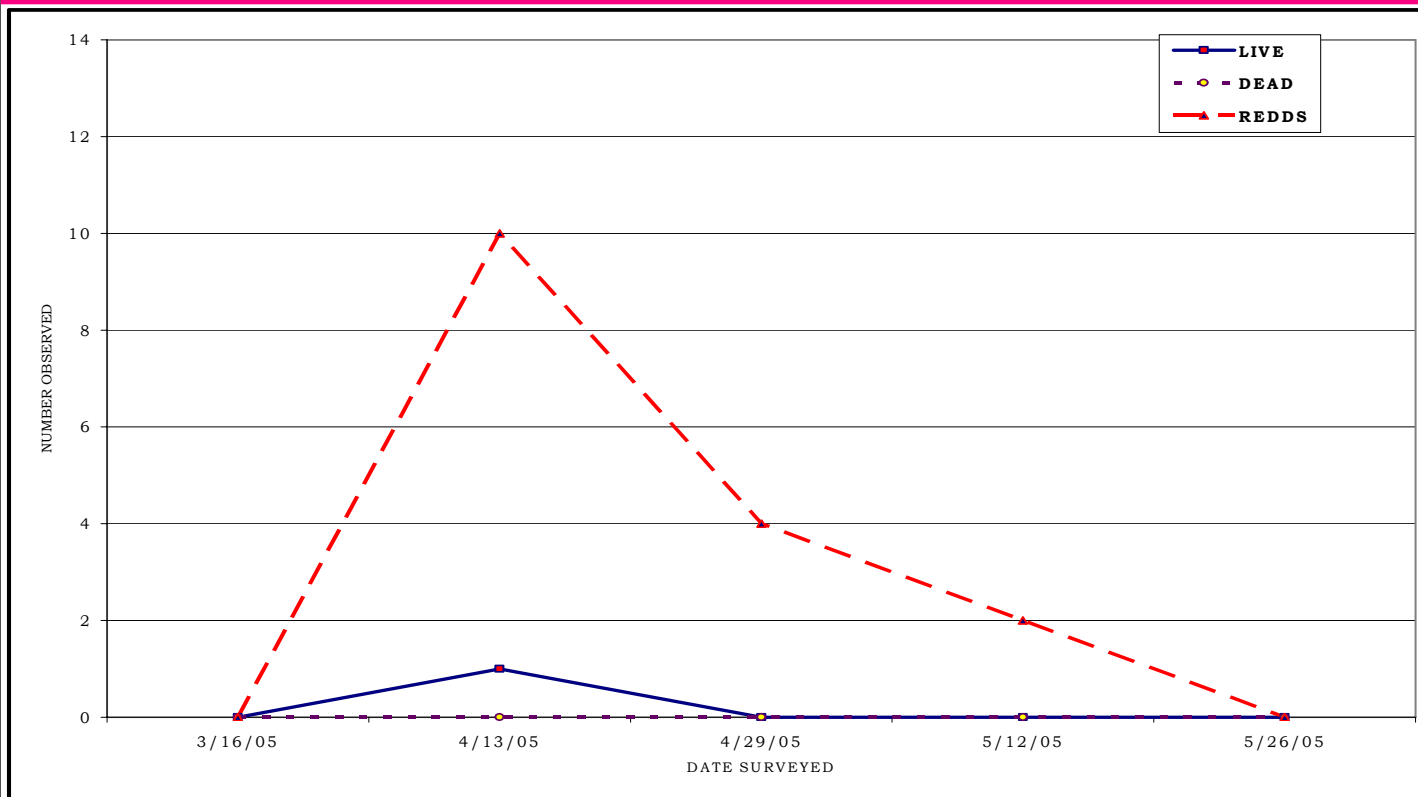


SURPLUS ADULT COHO PLANTS IN NIESSON CREEK (1998 - 2004)

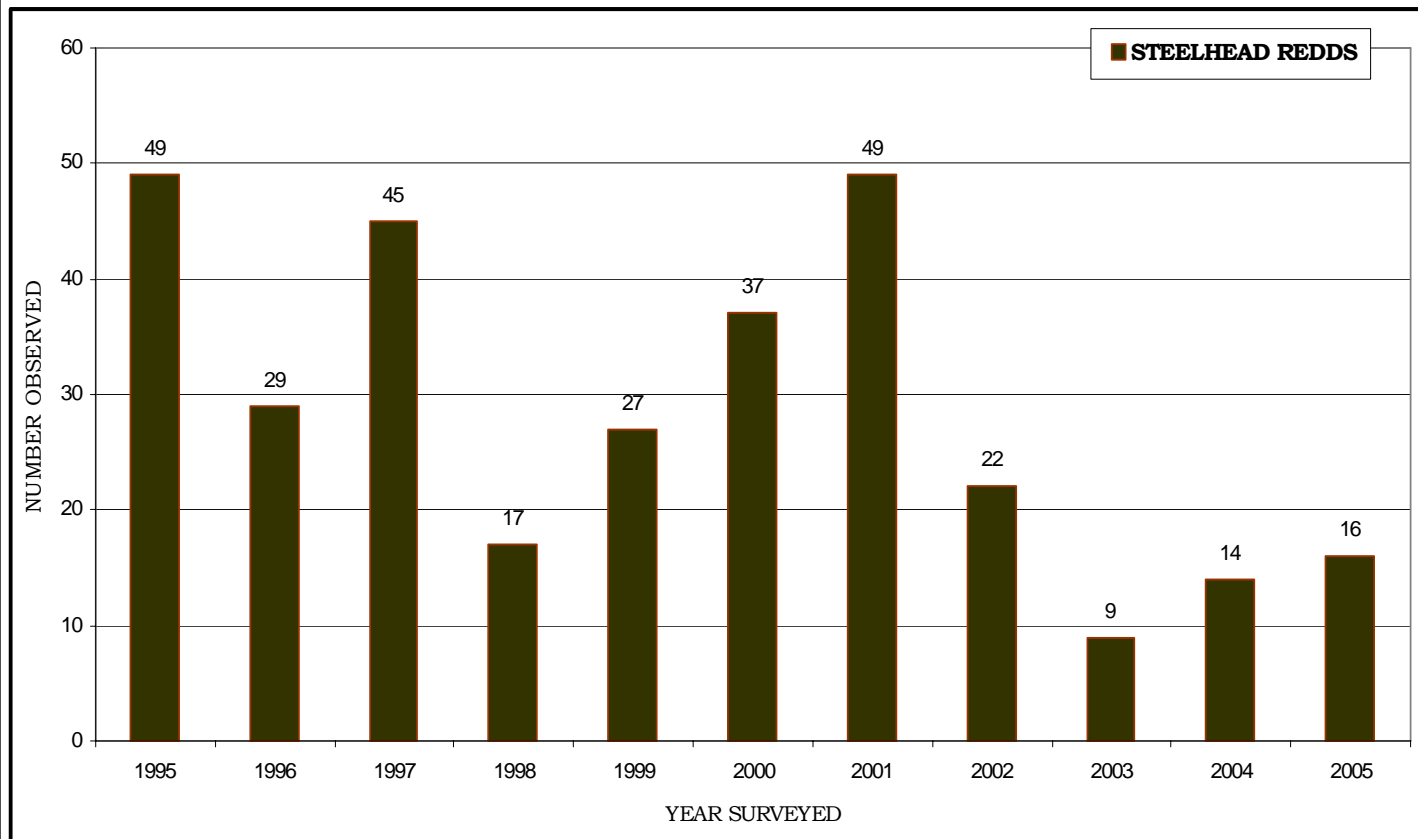
Live adult surplus plants from WDFW Voights creek hatchery.



2005 NIESSON CREEK STEELHEAD COUNTS



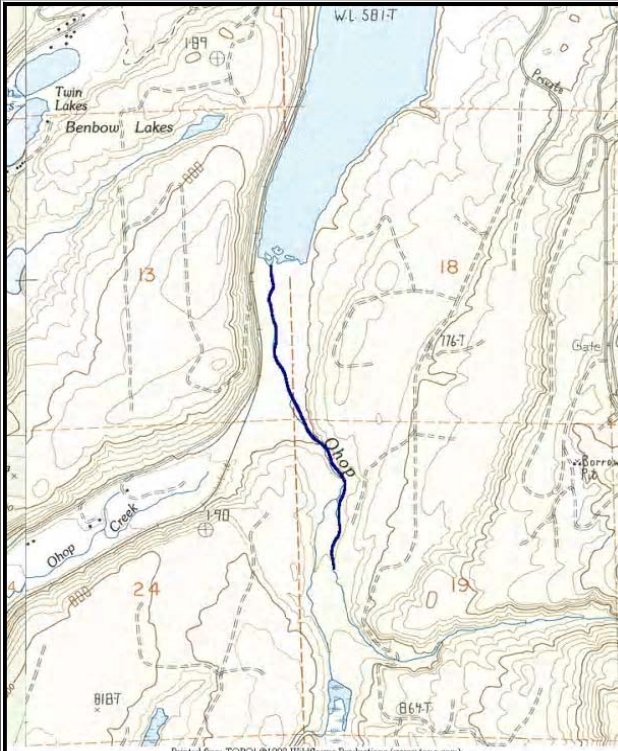
NIESSON CREEK STEELHEAD SEASON COMPARISONS (1995 - 2005)



OHOP CREEK

WRIA: 10.0600 - PUYALLUP RIVER

2004 - 2005



Several excellent spawning opportunities exist in the lower reach of Ohop.

DESCRIPTION

Ohop creek is the main feeder stream to Lake Kapowsin. Ohop and Kapowsin creek have the same WRIA designation (10.0600). Approximately the first 0.2 miles of Ohop creek flows through a heavily vegetated (mostly reed canary grass), narrow and incised zone as it enters Lake Kapowsin. The lower surveyed section of the creek from RM 6.5 (Lake Kapowsin) to RM 7.0 is a low gradient pool-riffle system. This portion contains excellent spawning gravel, as well as several deep pools and moderate amounts of in-stream woody debris. The channel meanders and several small side channels fork out along the lower half mile. Cattle occasionally have access to the creek, but they have had negligible impact. The overstory riparian consisting of cedar, fir, alder and maple is fairly dense along much of the lower 1.5 miles. The upper reaches of Ohop creek extend well into the Kapowsin tree farm (Camble Group) where logging roads and timber harvesting have impacted several portions of the stream.

Upper reach of the survey, increased gradient and fewer spawning opportunities are available.

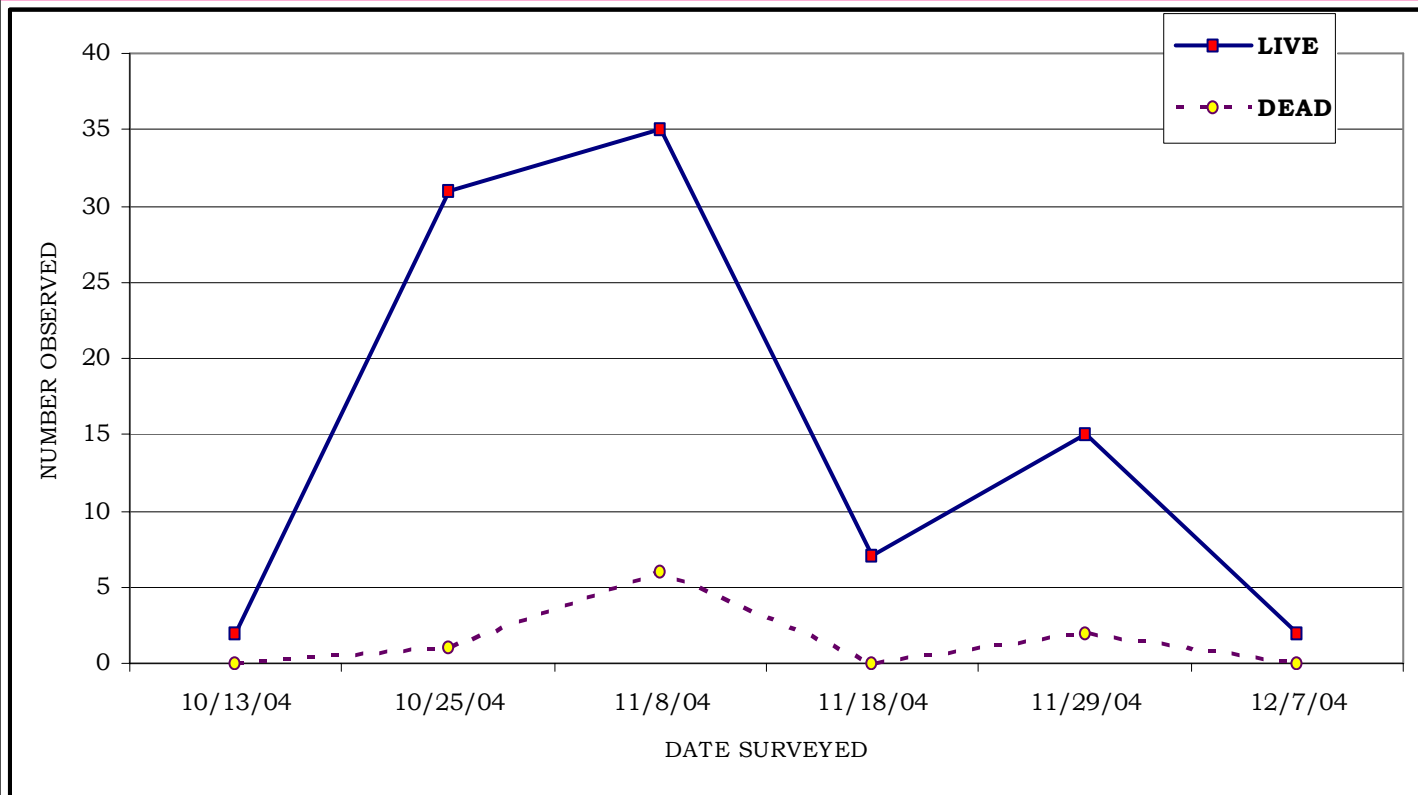
Coho are the only species surveyed for on a consistent basis. Steelhead surveys have been reduced to periodic spot checks during the spring since none have been observed for several years. Chinook salmon have not been observed in Ohop creek. Observations made in Kapowsin creek are often used to determine the survey approach for Ohop.

River miles surveyed: 6.5 to 7.5
Dates surveyed: 10/13/04 to 12/7/04
Species surveyed: Coho
Access

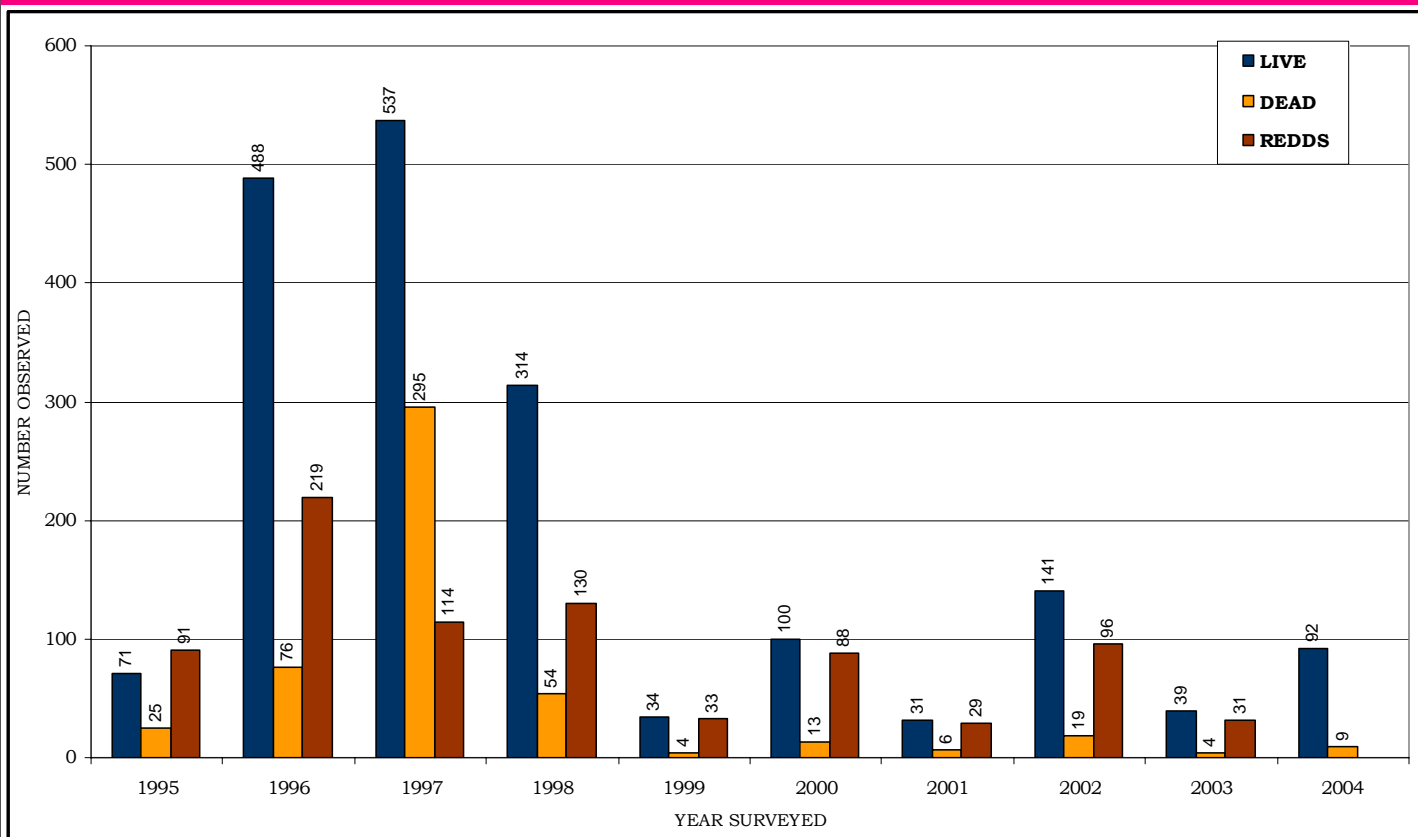
Mile 7.0: At the intersection of Orville Rd. and Kapowsin Hwy. follow Orville road for approximately two miles to a small turnout on the left. Follow the trail to the creek. The upper 0.5 miles must be double walked but it is possible to drop in just above RM 6.5 by crossing the railroad tracks and following a rough trail to the creek.



2004 OHOP CREEK COHO COUNTS



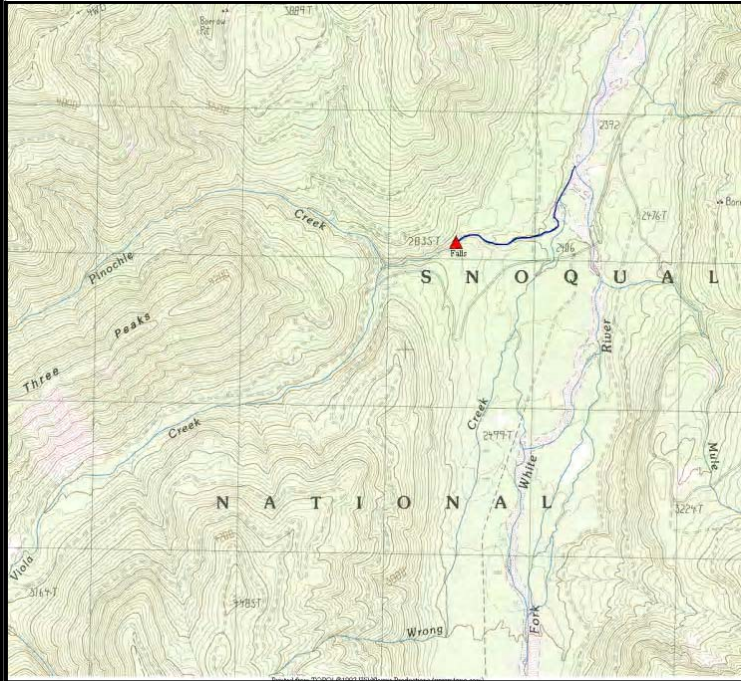
OHOP CREEK COHO SEASON COMPARISONS (1995 - 2004)



PINOCHLE CREEK

WRIA: 10.0198 - WHITE RIVER

2004 - 2005



Large resting pool in Pinochle creek (RM 0.2). Wrong creek can be seen entering in the center left side of the photo.



DESCRIPTION

There is a bedrock falls about 0.3 miles upstream of the bridge over Pinochle creek that blocks further upstream migration (lower left). Below this obstruction, to its confluence with the West fork of the White River, there exists excellent spawning and rearing habitat. The channel is low gradient, unconfined, and pool-riffle in character with abundant woody debris from the surrounding old-growth forest. Wrong creek, and Cripple creek are two small tributaries to Pinochle.

Pinochle is generally only surveyed for chinook salmon, but this years report includes some coho observations. Large numbers of coho are observed each season holding in two large pools just below the confluence with Cripple and Wrong creeks. Many of these coho will ascend Cripple and Wrong a couple of weeks after entering Pinochle. All adult salmon and steelhead that spawn in Pinochle creek were captured at the USACE fish trap in Buckley (pg. 5), and transported above Mud Mountain dam. Since precise escapement numbers for the upper White River drainage are known, surveys are conducted to determine fish distribution and spawning success. There is an acclimation pond on nearby cripple creek and returning chinook are likely the result of this enhancement program. Much of the spawning activity takes place in the lower 0.2 miles of this stream which runs within the West Fork White's floodplain.

River miles surveyed: 0.0 to 0.5
Dates surveyed: 8/17/04 to 11/19/04
Species surveyed: Chinook, Coho
Access

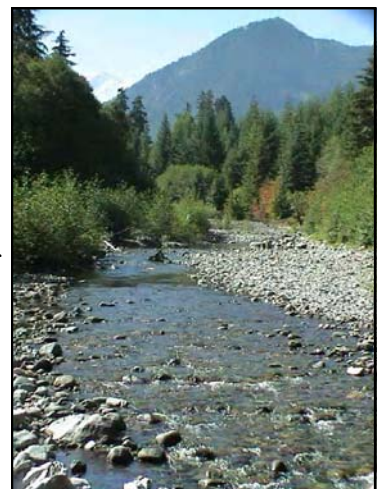
Mile 0.4: Approximately 0.25 miles past the West fork of the White River bridge on the Forest Service 74 Rd. there is a spur road to the right. This road crosses Pinochle creek within several hundred yards.

this years report includes some coho observations. Large numbers of coho are observed each season holding in two large pools just below the confluence with Cripple and Wrong creeks. Many of these coho will ascend Cripple and Wrong a couple of weeks after entering Pinochle.

All adult salmon and steelhead that spawn in Pinochle creek were captured at the USACE fish trap in Buckley (pg. 5), and transported above Mud Mountain dam.

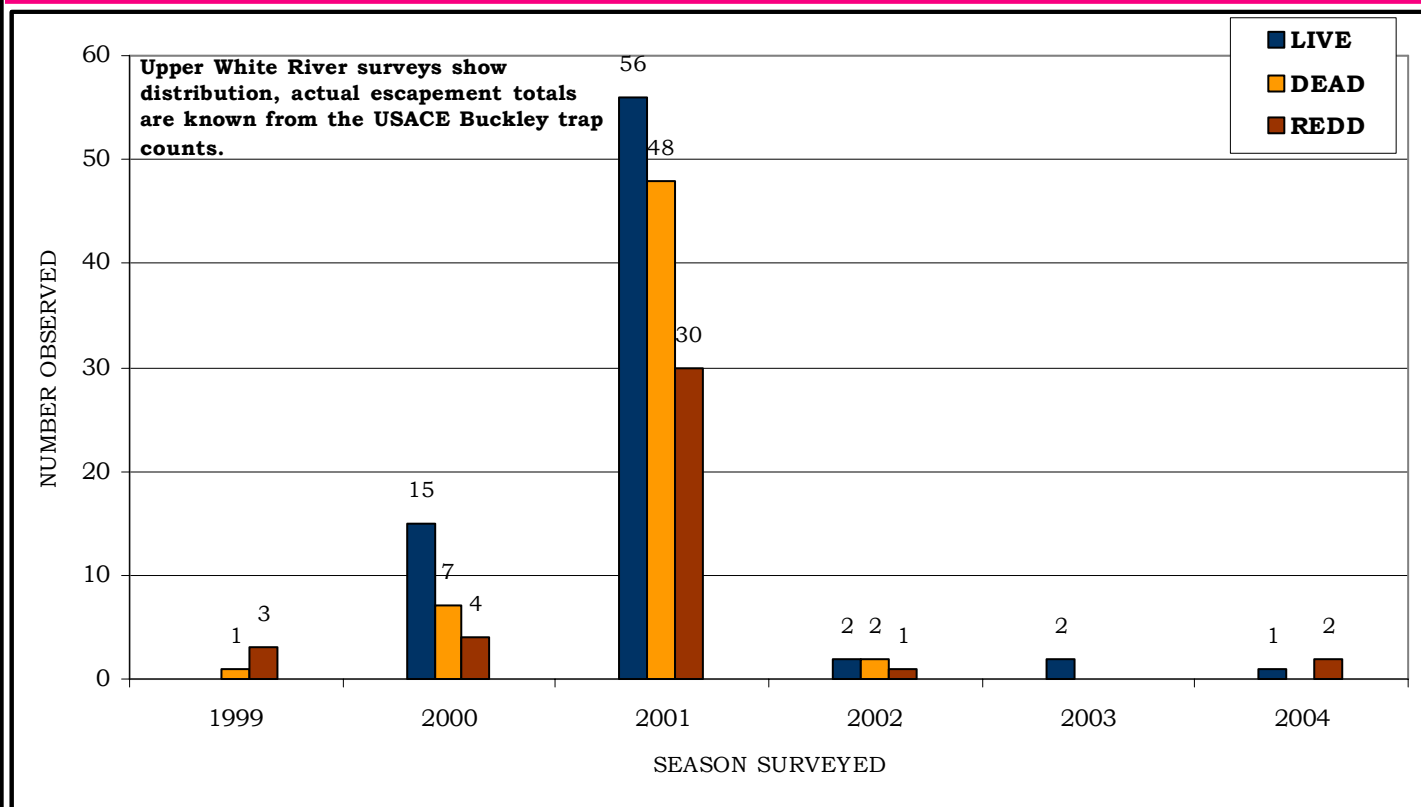


Anadromous blockage on Pinochle creek at approximately RM 0.8

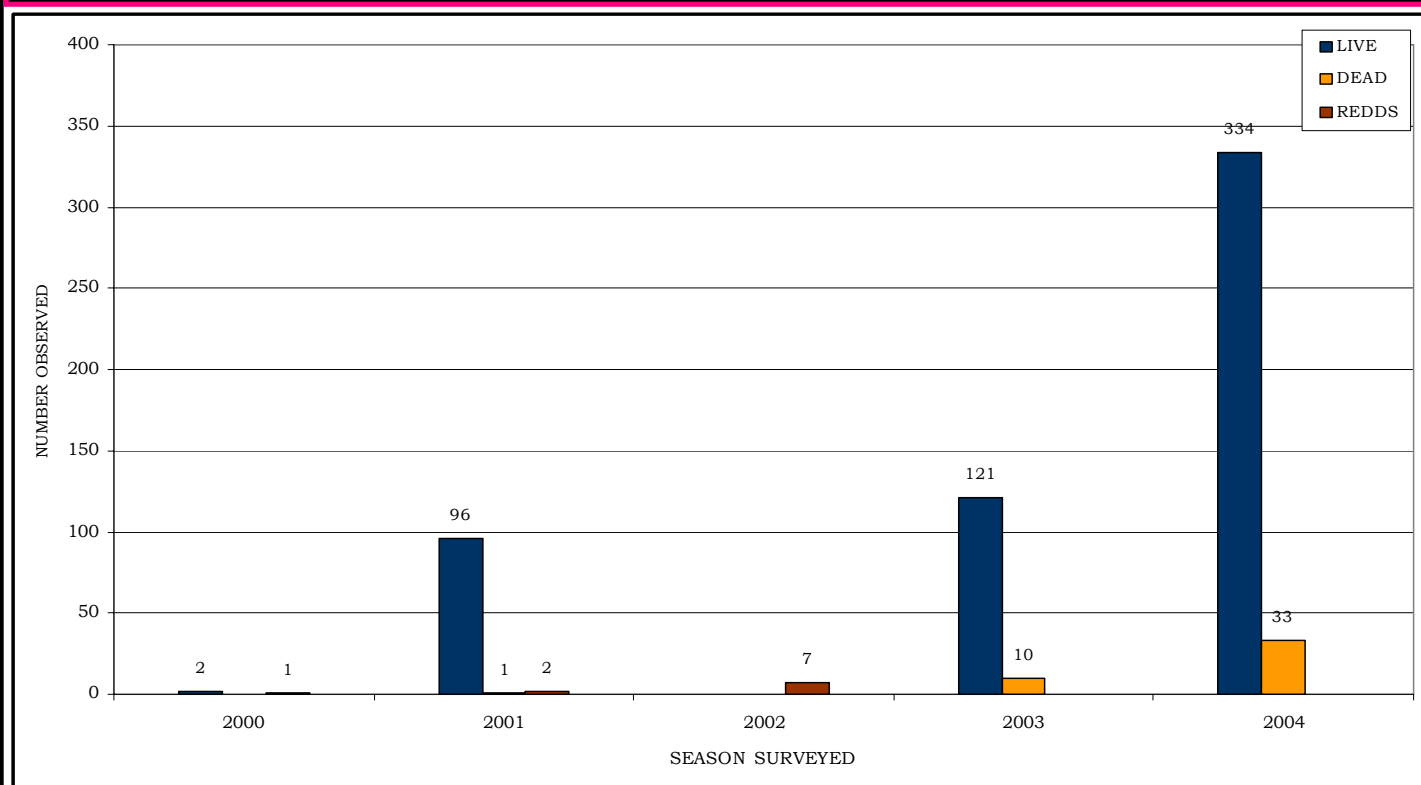


Looking upstream from the mouth of Pinochle creek. The prominent peak in the background is Clear West Peak.

PINOCHLE CREEK CHINOOK SEASON COMPARISONS (1999 - 2004)



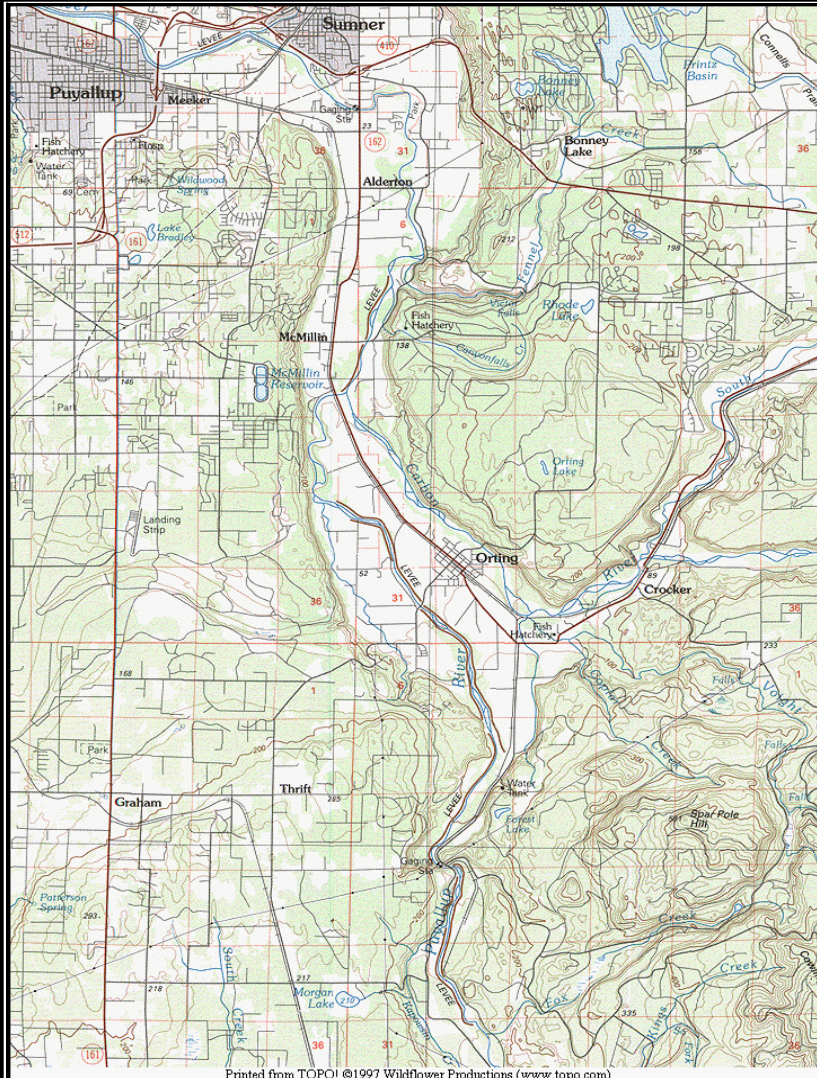
PINOCHLE CREEK COHO SEASON COMPARISONS (2000 - 2004)



PUYALLUP RIVER

WRIA: 10.0021 - PUYALLUP RIVER

2004 - 2005



DESCRIPTION

The lowest section of the Puyallup River, from the confluence with the White River at RM 10.7 to Commencement bay is confined by levees and the habitat lacks complexity. The small amount of suitable gravel present is often compacted and offers little spawning opportunity. Steelhead have been observed spawning just upstream from the White River confluence; the lowest documented spawning of any species in the river.

From the White River to the confluence with the Carbon River at RM 17.4 and upstream to about RM 23 just above the town of Orting, the river is still tightly confined by levees on both sides with the expected lack of channel complexity. This reach is similar to the lower Puyallup but does support sporadic spawning by chum, chinook and steelhead during their respective seasons.

Along Orville Rd., upstream of Orting, a levee setback project was completed in the summer of

River miles surveyed: 10.5 to 45.7

Dates surveyed: **OFTEN UNSURVEYABLE-NO RELIABLE COUNTS**

Species surveyed: Steelhead, Chinook



Seining the lower Puyallup river (RM 9) for juvenile chinook. This was part of a study conducted during 2004, to determine the residence timing of juvenile chinook in the lower Puyallup river.

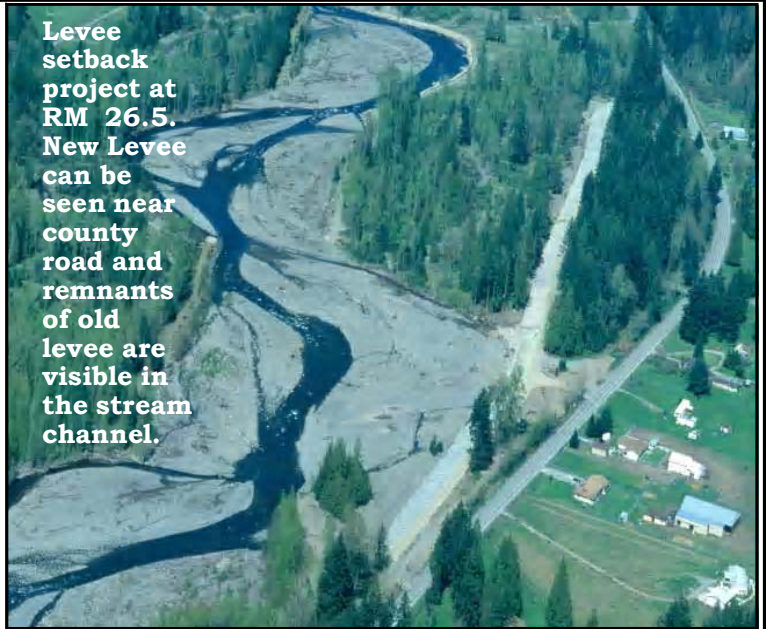
1999. Approximately 2 miles of new levee was built back from the original levee adding over a hundred acres to the floodplain in this reach. Several high water events later, many side channels have formed and spawning gravel has been retained but no adult use has been documented.

From RM 25.5 to 30.8 the channel is only partially contained by levees and there are many side channels. There is little spawning activity within this reach however, due to the higher gradient and resulting increase in average substrate size.

Upstream from Puget Sound Energy's Electron powerhouse at RM 30.8 the river flows through a deep, narrow canyon (center photo). There are many small vertical drops and bedrock cascades within this 6 mile canyon, all of which are passable to salmon and steelhead. There is frequent spawning opportunities in the tailouts of the many deep pools within this reach.

From RM 41.3 downstream to the top of the canyon the river is moderately confined and provides several high quality spawning

Levee setback project at RM 26.5. New Levee can be seen near county road and remnants of old levee are visible in the stream channel.

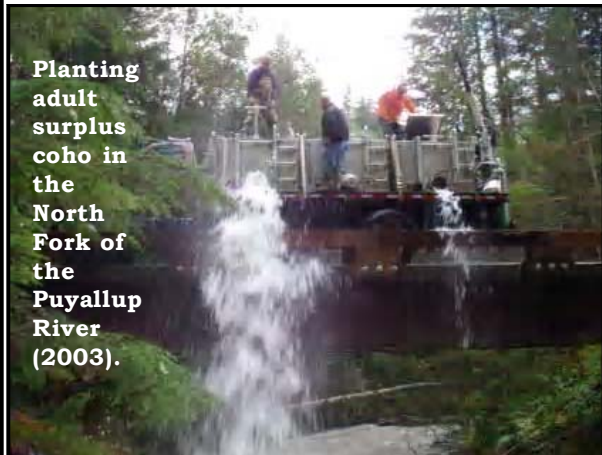


Puyallup River canyon approximately RM 31. There are many small vertical drops and bedrock cascades within this 6 mile canyon, all of which are passable to salmon and steelhead. There is frequent spawning opportunities in the tailouts of the many deep pools within this reach.

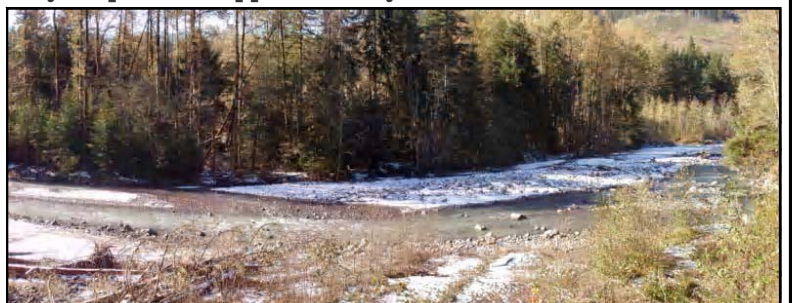
opportunities. The highest densities of steelhead spawning in the Puyallup River occur within this reach. With the completion of the Electron fish ladder (RM 41.7) in the fall of 2000, anadromous fish passage was restored for the first time since 1904. There are approximately 26+ miles of usable habitat above the diversion and surveys are

conducted occasionally in response to the Puyallup Tribes live surplus hauls each fall.

Planting adult surplus coho in the North Fork of the Puyallup River (2003).



Puyallup River approximately RM 40.



Puyallup River Juvenile Salmonid Production Assessment Project 2004

— Andrew Berger & Kristin Williamson —



The rotary screw-trap used in this study consists of a rotary cone suspended within a steel structure on top of twin, 30-foot pontoons. The opening of the rotary cone is 5 feet in diameter, allowing for a sampling depth of 2.5 feet. The cone and livebox assembly are attached to a steel frame and may be raised or lowered by hand winches located at the front and rear of the assembly.

potential-based management strategy and accurately forecast future returns of hatchery and naturally produced adults. In addition, a basin spawner/recruit analysis will indicate stock productivity, helping to determine the overall health of the watershed and evaluate the contribution of enhancement projects.

Trapping Gear and Operations

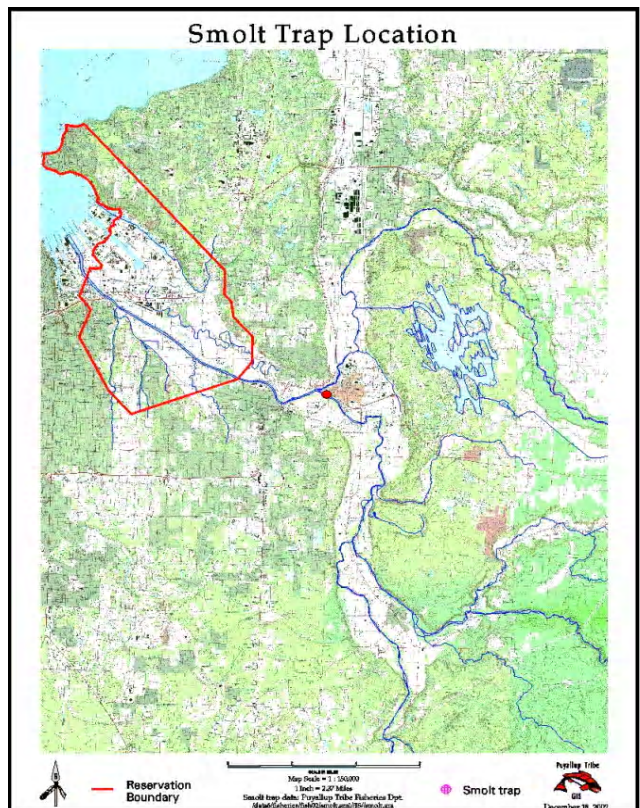
The rotary screw-trap used in this study consists of a rotary cone suspended within a steel structure on top of twin, 30-foot pontoons. The opening of the rotary cone is 5 feet in diameter, allowing for a sampling depth of 2.5 feet. The cone and livebox assembly are attached to a steel frame and may be raised or lowered by hand winches located at the front and rear of the assembly.

Two five-ton bow-mounted anchor winches with 3/8" steel cables were used to secure and adjust the direction of the trap and keep it in the thalweg. The cables were secured to trees on opposite banks. An additional rear cable was secured to a tree on the right bank along with an aluminum "stiff-arm" to

DESCRIPTION

In 2000, the Puyallup Tribal Fisheries Department started the Puyallup River Smolt Production Assessment Project to estimate juvenile production of native salmonids, with an emphasis on natural fall chinook salmon production and survival of hatchery and acclimation pond chinook. Since 2000, an E. G. Solutions' 5-ft diameter rotary screw trap located on the lower Puyallup at RM 10.6, just upstream of the confluence with the White River, has been used to estimate juvenile production.

As more data becomes available, juvenile production estimates may provide baseline information allowing managers to meet escapement objectives in the watershed, create a production



Since 2000, an E. G. Solutions' 5-ft diameter rotary screw trap located on the lower Puyallup River at RM 10.6, just upstream of the confluence with the White River, has been used to estimate juvenile production.

further stabilize the trap. Four 55-gallon containers filled with water were secured on the deck at the rear of the trap to compensate for the generation of force at the front of the trap during operation.

The 5-ft diameter rotary screw trap was installed in the lower Puyallup River (R.M. 10.6) just above the confluence with the White River. Trap operation began on February 26th at 1330 and continued 24 hours a day, seven days a week until August 11th at 0830, with the exception of an 88-hour period between May 26th and May 30th when the trap was pulled due



The trap was checked for fish twice a day at dawn and dusk. In some instances, the trap was checked plus or minus two hours of dusk or dawn due to the availability of personnel.

to a high flow event. The trap was checked for fish twice a day at dawn and dusk. In some instances, the trap was checked plus or minus two hours of dusk or dawn due to the availability of personnel. During hatchery releases and high flow events, personnel remained onsite through the night to clear the trap of debris and to keep fish from overcrowding.

Revolutions per minute (rpm), water temperature, secchi depth(cm), turbidity (NTU), weather conditions, and stream flow (cfs) were described for each completed trap check. A cross sectional area of the river at the smolt trap was taken to monitor channel morphology at the site.

GOALS AND OBJECTIVES

The goal of this project is to report production estimates, characterize juvenile

migration timing, describe length distribution for all wild salmonid, out-migrants and fulfill the objectives of the Puyallup River fall chinook recovery plan.

To reach these goals, this study will produce population estimates of out-migrating smolts, estimate species specific migration timing, compare natural versus hatchery production and run timing, analyze mean fork length of wild smolts and detail species composition of the sample population. The objectives of this project are to:

1. Estimate juvenile production for all salmonids in the Puyallup River and determine freshwater survival for unmarked juvenile chinook.
2. Estimate in-river mortality of hatchery and acclimation pond chinook.
3. Investigate physical factors such as, light (day vs.night), flow and turbidity and their importance to trap efficiency.

In this report for the 2004 smolt out-migration season all stated objectives will be met for chinook salmon. Non-target species such as coho, pink, chum and steelhead will be addressed to a lesser extent.

Sampling Procedures

Smolts were anesthetized with MS-222 (tricaine methanesulfonate) for handling purposes and subsequently placed in a recovery bin of river water before release back to the river. Juveniles were identified as natural or hatchery origin as unmarked or marked respectively. Fork length (mm) was measured and recorded for unmarked fish. When possible, 50 chum, 50 pinks, 50

age 1+ coho, 25 age 0+ coho, 25 age 0+ chinook, and 25 steelhead were measured per day. Scale samples were additionally taken on all wild steelhead smolts.

Species were separated by size/age class. Coho were identified as fry, age 0+ (<70mm) or smolts, age 1+ (>70mm). Chinook smolts were separated by age 0+ (<150mm) or age 1+ (>150mm). All chum and pinks were identified as age 0+. Trout fry age 0+ (<60mm) were not differentiated to species.

Hatchery origin fish were identified in three ways: 1) by visual inspection for adipose fin clips, 2) with a Northwest Marine Technology "wand" detector used for coded wire tag detection, and 3) with a Destron Fearing Portable Transceiver system for Passive Integrated Transponder (PIT) tagged fish. To receive a full copy of the 2004 report, contact the Puyallup Tribal Fisheries Department.

Summary of Results

- ❖ For the 2004 migration season production estimates were completed for chinook, pink and chum migrants. No production estimates were made for coho and steelhead during the 2004 season due to a lack in availability of smolts to complete capture efficiency tests.
- ❖ Natural chinook production was estimated at 73,620 migrants from a catch of 795 unmarked chinook. outmigration occurred between March 1st and August 6th, with a median migration date on May 29th. Relating the natural chinook production estimate to potential egg deposition above the trap yields an egg-to-migrant survival estimate of 3.31%.
- ❖ A total of 54, 192 pink migrants were caught in the trap between February 26th and June 1st. Pink outmigration was unimodal with median migration occurring on March 19th. Production was estimated at 1,988,441 pink migrants passing the trap during the 2004 trapping season.
- ❖ Chum production was estimated at 95,133 migrants passing the trap in 2004 from a catch of 2033 chum fry. Chum outmigration progressed steadily for a three month period between March 2nd and June 2nd. The median migration date was April 19th.
- ❖ A total of 600 coho smolts were captured in the screw trap between March 7th and July 23rd. Migration, as reflected by catch was unimodal with a median migration data on May 12th. Production estimates will be available for the 2005 smolt trap season.
- ❖ Only 39 unmarked steelhead were caught in the smolt trap between April 7th and July 22nd. No production estimates were completed for steelhead migrants.

PUYALLUP RIVER: ELECTRON FISH LADDER TRAP

WRIA: 10.0021 - PUYALLUP RIVER WATERSHED

2004 - 2005

River Mile: 41.7

Species sampled: Chinook, Coho, Steelhead

DESCRIPTION

With the completion of the Electron fish ladder (R.M. 41.7) in the fall of 2000, anadromous fish passage was restored to the upper Puyallup River for the first time since 1904. There are approximately 26+ miles of usable habitat above the diversion and surveys are conducted occasionally in response to the Puyallup Tribes live surplus hauls each fall. Naturally returning steelhead and chinook were observed above the diversion soon after the ladders completion.

A passive fish trap was constructed and installed in the summer of 2002. The aluminum trap was placed in the lower end of the fish ladder (cell 7), and is lifted by a 2 ton electric winch powered by a diesel generator. It is necessary to raise the trap to access the fish that have entered. The inside of the trap can be accessed through removable side and top panels. The trap had limited success in 2002, 2003 and 2004 due to low flows, sediment build-up in



(Above) Electron ladder trap shown in the raised position. (Center) Electron ladder, trap and diversion. (Bottom) Installation of the Electron fish ladder trap in the summer of 2002. The green box houses the diesel generator that powers the electric winch used to move the trap.

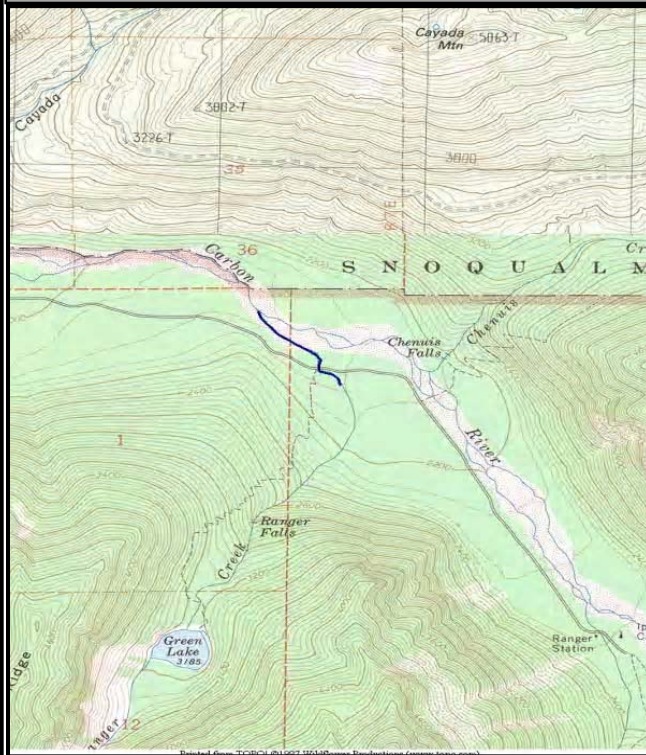


the trap and ladder cells, possible trap avoidance by migrating fish and occasional high flows which went over the trap. No steelhead were captured in 2004. Tribal Fisheries staff completed its fourth year of monitoring and maintenance of the Electron dam fish ladder. Our new DIDSON sonar system was installed in August of 2004. The system is complicated, and providing a steady power source proved more difficult than expected. Nonetheless, most of the bugs have been worked out and the system will be ready to count fish in early 2005.

RANGER CREEK

WRIA: 10.0530 - CARBON RIVER

2004 - 2005



Ranger creek looking upstream from the confluence with the Carbon River .

DESCRIPTION

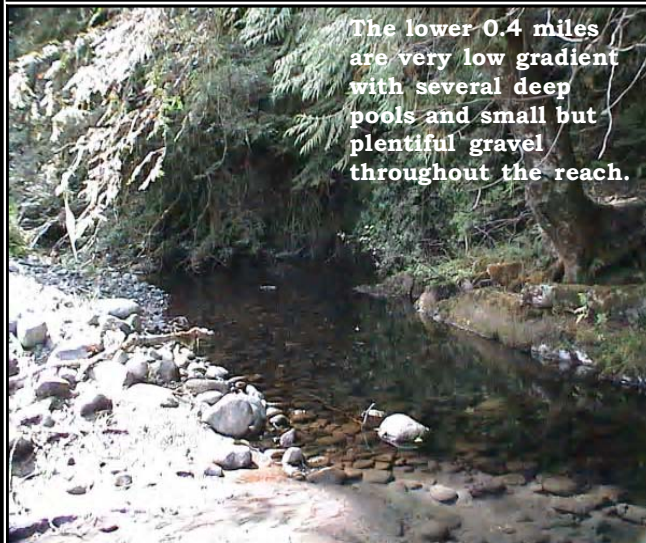
Ranger creek is a small left bank tributary of the upper Carbon River. Ranger is an excellent salmonid stream in many ways, it has approximately 0.5 miles of anadromous habitat and is located entirely within Mt. Rainier National Park. The riparian zone consists of old growth cedar, fir and hemlock which contributes essential woody debris and diversity to the channel. The lower 0.4 miles are low gradient with several deep pools, small but plentiful gravel exists throughout the reach. Above 0.4 miles the gradient increases significantly. The Carbon River road crosses the creek at approximately RM 0.35. The creek passes through a large culvert under the road bridge (right). The fall of 2000 was the first year any salmon spawning surveys were conducted and none were observed. Several redds were observed early in the spawning season but their small size and timing matched the char spawning documented in other headwater tributaries in the watershed. Due to the creeks remote location, surveys are not conducted on a regular basis.



River miles surveyed: 0.0 to 0.4
Dates surveyed: **NOT SURVEYED IN 2004**
Species surveyed: Chinook, Coho, Char

Access

Mile 0.1: The Carbon River road in Mount Rainier National Park crosses Ranger below the Ipsut creek campground.

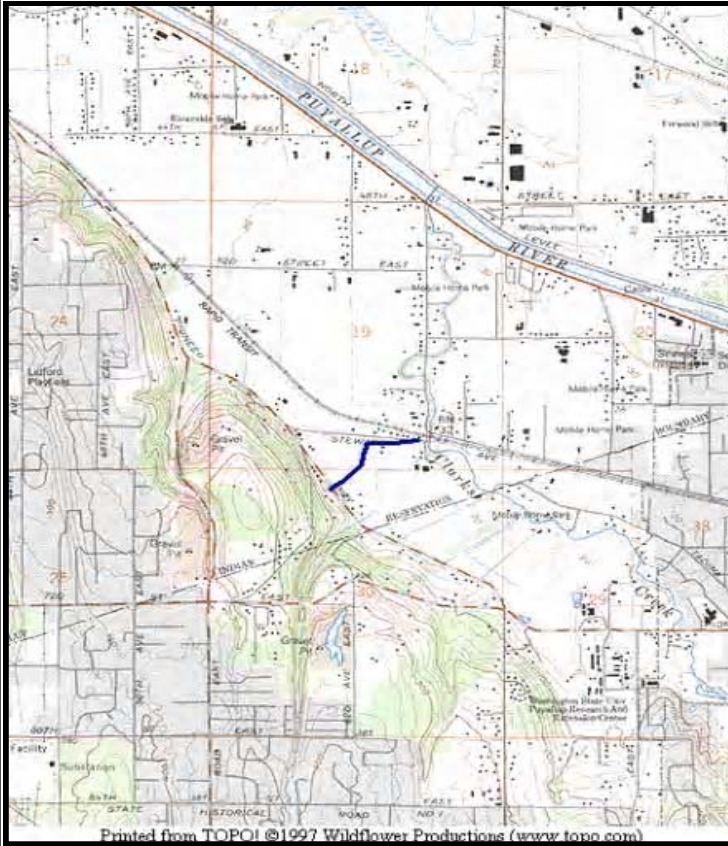


The lower 0.4 miles are very low gradient with several deep pools and small but plentiful gravel throughout the reach.

RODY CREEK

WRIA: 10.0028 - PUYALLUP RIVER

2004 - 2005



River miles surveyed: 0.4 to 0.5

Dates surveyed: 11/15/04 to 1/20/05

Species surveyed: Chum

Access

Mile 0.4: Pioneer Avenue crosses Rody creek a short distance above it's confluence with Clarks creek.

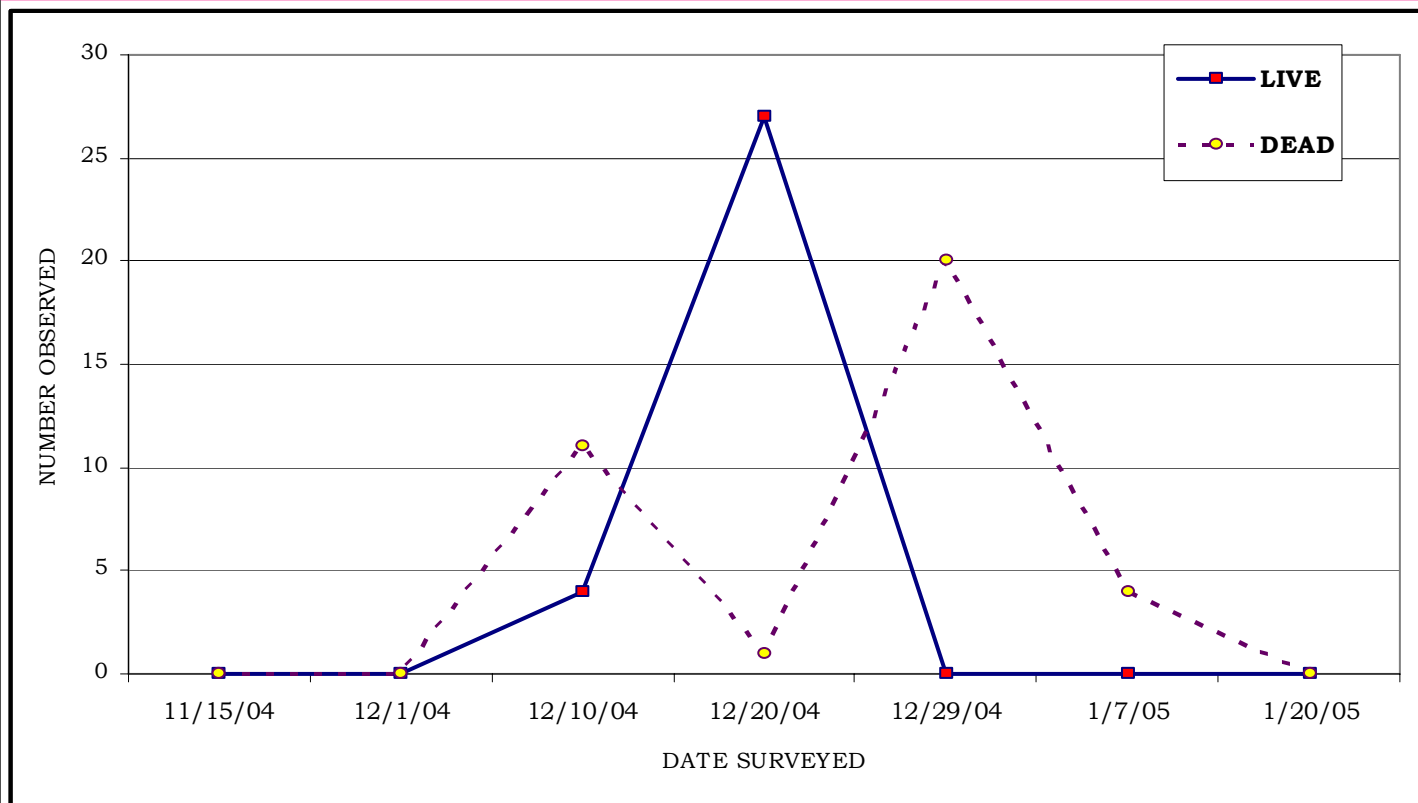
Rody creek looking upstream towards Pioneer Way.
DESCRIPTION

Rody creek passes under Pioneer Way E. at RM 0.5 through a small, yet passable culvert. Above the culvert, the gradient increases considerably and the habitat is not conducive to spawning. Downstream of Pioneer, Rody flows through a channel that is best described as an incised and directed drainage ditch than a natural channel. A half mile downstream of Pioneer, Rody creek dumps into Clarks creek. The habitat quality in Rody is poor, much of the accessible channel is choked with reed canary grass. The channel becomes surveyable generally after the first freshet of the season. However, chum salmon and coho are often observed spawning in the stream when the channel clears. Several chum spawn each season in the small section of available habitat just below Pioneer. A few coho are occasionally observed in the creek as well.

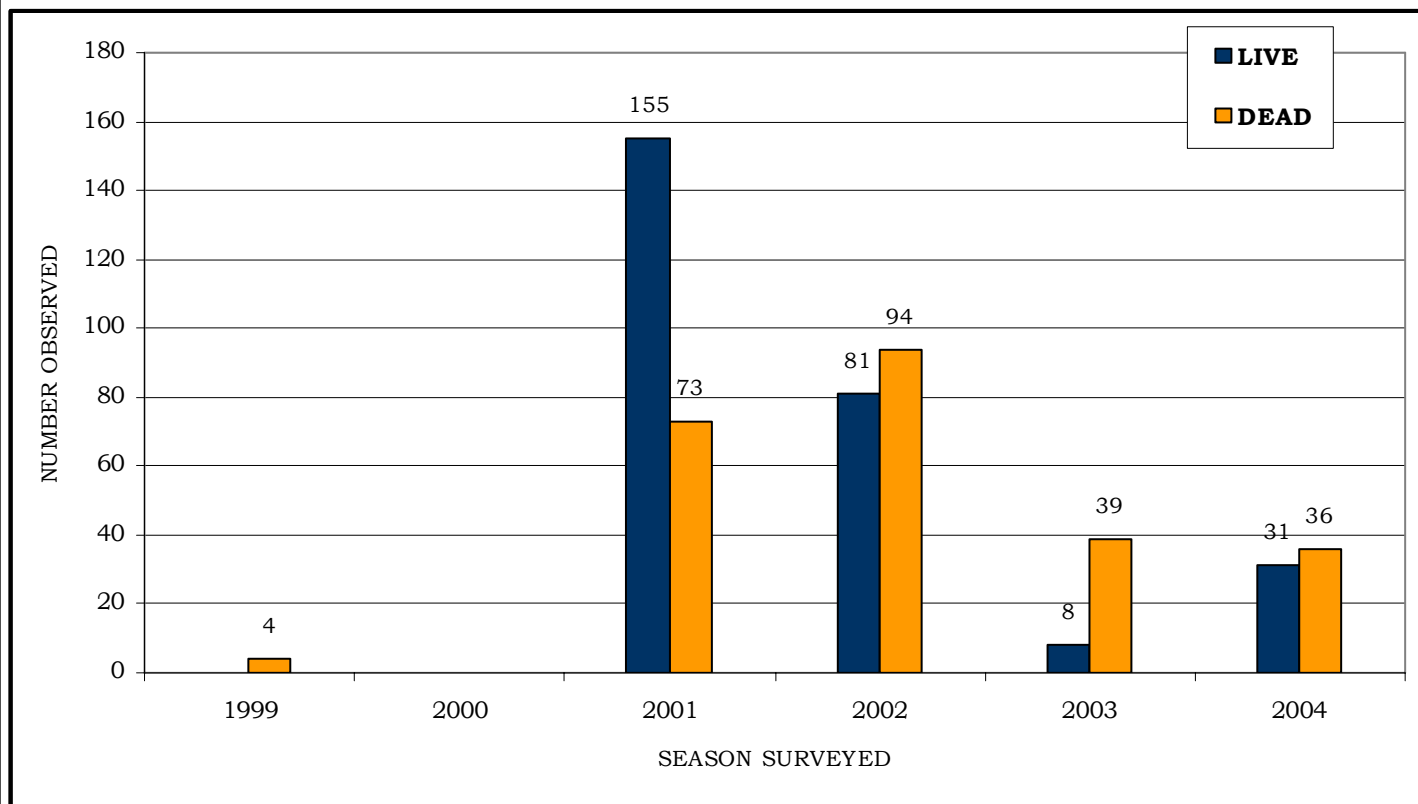
The habitat quality is poor, with much of the accessible channel choked with reed canary grass.



2004 RODY CREEK CHUM COUNTS



RODY CREEK CHUM SEASON COMPARISONS (1999 - 2004)



RUSHINGWATER CREEK

WRIA: 10.0625 - PUYALLUP RIVER

2004 - 2005



Lower reach of Rushingwater creek (RM 0.4)

DESCRIPTION

Rushingwater creek originates from the Golden lakes in Mt. Rainier National Park. Rushingwater flows over 5 miles to its confluence with the Mowich River at RM 0.6. Most of Rushingwater flows within the Rainier Timber - Kapowsin tree farm (Campbell Group LLC), where roads and timber harvesting have impacted several portions

River miles surveyed: 0.0 to 1.0
Dates surveyed: 10/13/04 to 11/30/04
Species surveyed: Chinook, Coho

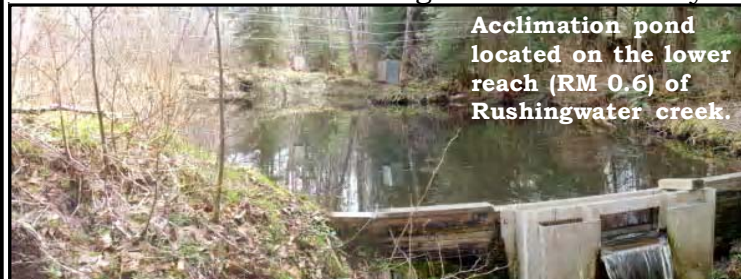


Upper reach of Rushingwater creek (RM 3.1).

of the stream. The upper survey reach of the creek is mostly comprised of pools and glides, with fine and medium sized substrate. Abundant in-stream woody debris and a moderate to dense canopy cover extends through most of this reach. A considerable amount of beaver activity and structures are present in the upper reach, above RM 3.0, and lower down around RM 1.5. The lower reach (1.0 mile) of the creek consist of a more complex riffle - pool complex. The substrate is considerably larger, consisting of large gravel, cobble and boulders. Several windblown trees span the channel at RM 0.5. One of two acclimation ponds used



for reintroducing coho into a 30-mile reach of the Upper Puyallup River is located just off the main channel of Rushingwater at RM 0.6. The pond holds 14,000 cu. ft. of water with a flow rate of 1-3 cfs., currently 40,000 to 100,000+ coho yearlings are imprinted and released from Rushingwater annually. Coho yearlings originate from Voights Creek Hatchery where they are adipose clipped and coded wire tagged (right photo). Fish are released at 20 fish per pound, for a total biomass of 10,000 pounds. In addition to the acclimation of juvenile coho, adult surplus coho and chinook from Voights creek hatchery have been planted in Rushingwater since 1997.

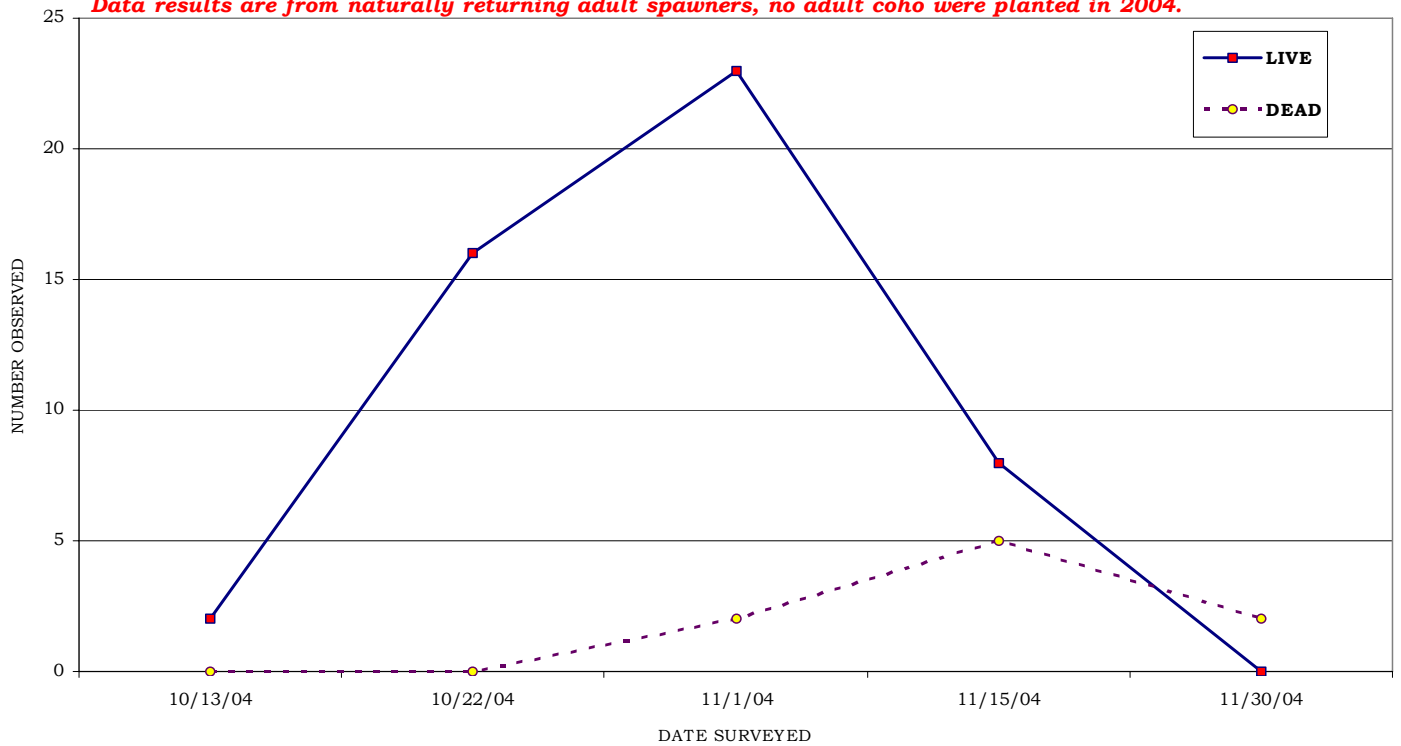


Acclimation pond located on the lower reach (RM 0.6) of Rushingwater creek.

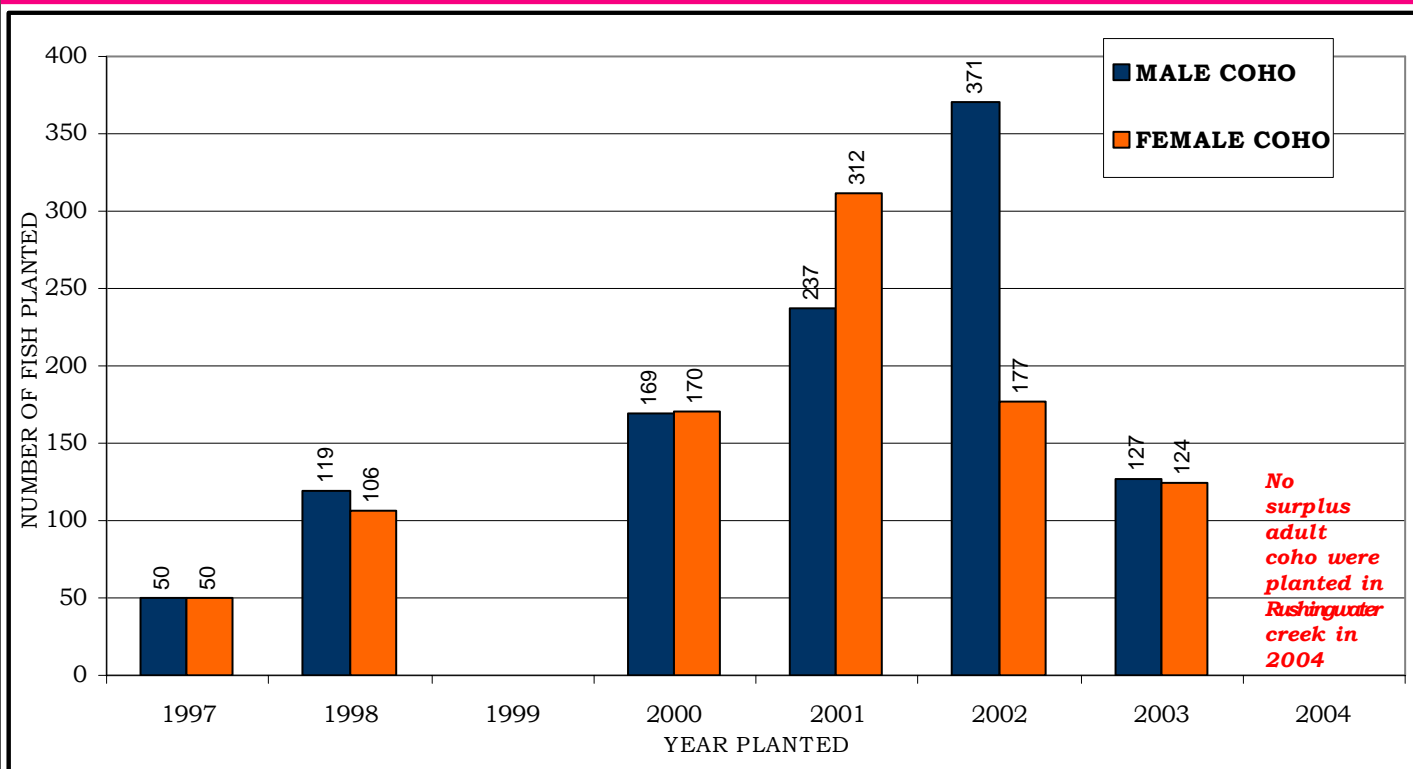
Limited surveys were conducted in the past to determine how successful the adult plants were. However, no fish were planted in 2004. Instead, the first naturally returning adult coho were allowed to spawn without intervention from hatchery planted coho. Future live plants may be reduced or eliminated based on the number of naturally returning spawners.

2004 RUSHINGWATER CREEK COHO COUNTS

Data results are from naturally returning adult spawners, no adult coho were planted in 2004.



RUSHINGWATER CREEK ADULT COHO PLANTS (1997 - 2004)



RUSHINGWATER CREEK ACCLIMATION POND CHINOOK AND COHO PLANTS (1999 - 2005)

